Early Eneolithic in the Pontic Steppes

Nadezhda Sergeevna Kotova

Translated from Russian by N.S. Makhortykh

BAR International Series 1735
2008

This volume of *British Archaeological Reports* has been published by:

John and Erica Hedges Ltd.
British Archaeological Reports
7 Longworth Road
Oxford OX2 6RA
England
Tel/Fax +44(0)1865 511560
E-mail: publishing@barhedges.com
www.barhedges.com

Enquiries regarding the submission of manuscripts for future publication may be sent to the above address.

BAR S1735

Early Eneolithic in the Pontic Steppes

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Printed in England by Chris Fowler International

ISBN 978 1 4073 0207 2

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Hadrian Books
122 Banbury Road
Oxford OX2 7BP
England
Tel +44 (0) 1865 310431 Fax +44 (0) 1865 316916
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This book is dedicated to the memory of Igor Vasiliev – the leading specialist in the Early Eneolithic of the Eastern Europe

Introduction

The history of steppe population of the Eastern Europe attracts attention of a wide range of specialists. Their interest is maintained by regular excavations, which broaden our knowledge about the culture of steppe inhabitants. Archeological materials, accumulated during last years, allow us not only specify and enlarge, but, factually, create a new view on the Early Eneolithic of Eastern Europe.

The Eneolithic of that region began with appearance of the first metal objects made of copper regardless of their origins and function. The first metal products appeared there as a result of contact with the Balkan-Carpathian region. Skills of metalworking were also borrowed from there. In this connection as the Eneolithic may be attributed those cultures of steppe region or stages of their development, at which sites the copper objects are represented and the contacts with population of neighboring Gumelnița and Tripolye Eneolithic cultures are traced. Rarity of the first metal finds increases the significance of the factor of culture contact, which found its reflection in interferences of archaeological materials. Taking this into account, to the Early Eneolithic could be attributed the monuments of the second period of Azov-Dnieper culture and the Sredniy Stog culture in steppe Dnieper and Azov Sea area. The second period of Azov-Dnieper culture was closely related to the cultures of the Late Neolithic and was studied in author's earlier works (Котова 1994; Kotova 2003).

The term "Early Eneolithic" is used in the given work for a designation of the period covering existence of the first Eneolithic steppe cultures, which were synchronous to the sites of Tripolye A, B I and B I - II periods (5400-4200 BC). These cultures were replaced in steppe by the sites of the Middle Eneolithic, which were synchronous to the Tripolye B II and the beginning of Tripolye C I stages.

Process of introduction of copper into the everyday life in some degree coincided with completion of integration of different cultural groups of Neolithic steppe population and formation of new cultural group on their basis – the Sredniy Stog culture. Development of that culture, which was genetically related to the local Neolithic, represents substance and specifics of the Early Eneolithic in the Black Sea steppe. We can give its description only on the basis of analysis of all available monuments of this region and, first at all, materials of settlements. Before now settlement complexes were described and illustrated only selectively and the main part of these materials remained unpublished. Researchers are mainly interested in the spectacular Early Eneolithic burials with rich grave goods. Practically all cultural-chronological schemes were built on the basis of analysis of those burials. This circumstance substantially embarrassed the objective study of culture of steppe population and understanding of its development. In this connection one of the main tasks of this book is the complete publication of settlement materials. Stratigraphy of multilayer sites in conjunction with the series of radiocarbon dates have been the basis of periodization and chronology of the Sredny Stog culture.

For the first time the data about environmental situation, which played an important role in such arid region as the south of steppe zone, was used in this book. Climatic changes and the adaptation of steppe population to those changes caused economic modifications and migrations, which have resulted in changes of cultural-historical situation.

Taking into account the above-mentioned facts as well as the analysis of materials of cultures of the Late Neolithic, we can offer detailed description of process of Early Eneolithic culture formation in the Pontic steppe. The cultural environment, represented mainly by the bearers of Tripolye culture and inhabitants of Northern Caucasus, played an important role in historical destiny of the steppe population. Moreover, with the help of available materials we can examine cultural interactions of steppe population from the Volga to the Danube.

Special attention is devoted to the reconstruction of social and economical structure of steppe population in the Early Eneolithic. Faunal materials together with imprints of cultural plants on ceramics and palynological data have given the information about the cattle breeding, agriculture and hunting. Burial materials have allowed me to reconstruct social structure in the Early Eneolithic society.

During the preparation of this book all the Eneolithic collections, which are kept in the depositories of the Institute of Archaeology of National Ukrainian Academy of Sciences, the National Museum of the History of Ukraine in Kiev, Museums of Regional Studies in Zaporozhye and Lugansk as well as at the Eastern Ukrainian University in Lugansk were examined. I also studied materials from the depositories of the Voronezh Museum of Regional Studies, Voronezh Pedagogical University, Rostov Museum of Regional Studies, Rostov National University and also the Museum of Don Cossack in Novocherkassk.

This work would be impossible without the help of my colleagues. I would like to thank V.Y.Kijashko, who gave me a possibility to take part in excavations of the Razdorskoe I settlement and study its materials, which are necessary for understanding of formation and development of the Early Eneolithic in the Pontic steppe. I am also grateful to Samara archaeologists: I.B.Vasiliev, S.A.Agapov, V.I.Pestrikova, P.P.Barynkin and E.V.Kozin, who helped me to become acquainted with materials of the Khvalynsk culture. I tender special thanks to N.B.Burdo and M.Y.Videiko for numerous consultations about the Tripolye culture.

In this book the history of study of the Early Eneolithic in steppe zone will not be considered. It was examined by Y.Y.Rassamakin (1999). I should only mention, that in the beginning of 1990s Y.Y.Rassamakin and author offered a new historical-cultural scheme of the Eneolithic in the steppe of Ukraine. It was developed on the basis of settlements (N.S.Kotova) and burials (Y.Y.Rassamakin). We divided all the monuments of the Sredniy Stog culture into several archaeological cultures (Skelanskaja, Dereivskaja and Kvitanskaja), which differed in a time of their existence and territory of distribution. Unfortunately, our joint paper, in which that scheme was represented, has been given in press more then ten years ago and stayed unpublished until now. Y.Y.Rassamakin used the main conclusions of that joint work in his following studies (1994; 1997; 1999; 2004). They were also described briefly by the author (Котова 1996). But new excavations and the following analysis of available data forced me to correct that scheme, and propose its future development in a new direction. Some theses have been already published (Санжаров, Бритюк, Котова, Черных 2000; Kotova, Videiko 2004; Kotova 2005), but the most complete scheme of development of the Early Eneolithic culture of the Pontic steppe is represented in this book.

CHAPTER 1. SOURCES AND RESEARCH METHODS

1.1. SOURCES AND CRITERIA OF THEIR SELECTION

The main attention in this work is focused on the settlement materials. They give us the most convincing basis for distinguishing of different features of the archaeological cultures and creation of cultural-chronological schemes. This is connected with multiplicity of archaeological materials at the settlements in contrast to the burials.

Studying of materials from each site in combination with analysis of field reports was made. The majority of settlements were excavated by squares 2x2 m. Separate stratigraphical columns for each square were made where depth of each object was indicated. Consecution and depth of deposition of each soil layer were examined on the basis of description and drawings of walls of excavation trenches. Archaeological materials were correlated with soil layers, too. Then the squares with clear stratificated cultural deposits were distinguished. Their ceramics, flint and bone complexes became the basis of characterization of cultural layers of sites.

The selection of burials of the Early Eneolithic was made on the basis of two main criteria: radiocarbon dating and grave goods, which found analogies in materials of the synchronous settlements. Making a comparison of ceramics from the settlements and graves I considered, that some burials (especially the children ones) were accompanied by special pots, which differed by its size. The diminution of size, which was traditional for settlement ceramics, caused some distortion of the funeral pottery forms, which complicates its comparison with the settlement vessels. But study of all settlement materials allows me to find analogies for funeral pottery.

Cooper tools and adornments belong to the dating objects among the grave goods, because they related with the metalworking of the Early Eneolithic (Рындина 1998, с.191). Such cemeteries as Alexandrovsk, Chapli, Giurgiulesti, Krivoy Rog, Mariupol, Novodanilovka and Petro-Svistunovo can be attributed as the Early Eneolithic on the basis of this criterion. N.V.Ryndina synchronize them with the end of the Tripolye A and B I on the basis of metal artifacts.

It is also possible to include in this group Yama and Karataevo cemeteries, grave at Lugansk (Voroshilovgrad) and group of burials, which is localized to the west of Dniester – Chongrad, Decea Mureşului, Falciu, Kasimcha, Reka Devna. All of them are unified with above mention cemeteries the wide use of stone in funeral rite and common funeral inventory (large and medium flint blades, wood-working tools, arrow heads, spear and dart heads, bone and nacre beads).

Burial group from Northern Caucasus can be considered as the Early Eneolithic, too. The beginning of the Eneolithic in that region was related with the settlements of Meshoko-Zamok type (Нехаев 1992; Кореневский 1998). They were synchronized with burials, flexed on the back and painted with ochre, which were often located under kurgans and accompanied with large flint blades, polished axes, stone and bone beads, etc. Their inventory and adornments find analogies in local Northern Caucasia settlements and sites of the Sredniy Stog-Khvalynsk circle (Кореневский, Наглер 1987; Гиджрати 1986, etc).

Questions related to the chronological position of the Igren and Alexandria cemeteries are really controversial. On Y.Y.Rassamakin’s opinion, the

burials of Alexandria and Igren with large flint blades belong to the Skelanskaja culture of the Early Eneolithic. Other burials of these cemeteries are younger (Rassamakin 1999, p.77, 103; Рассамакин, Евдокимов 2001, с.82).

D.Y.Telegin and A.L.Nechitailo included these monuments in the second period of the Sredniy Stog culture together with the Dereivka and Molukhov Bugor sites. This hypothesis is based on similarity of the pots from the burials and the pottery of these sites. These authors accordingly considered those cemeteries younger, than burials of the Chapli, Petro-Svistunovo, Mariupol, Novodanilovka, Krivoy Rog and other cemeteries, which they united in the Novodanilovka group of the Early Eneolithic (Нечитайло 1996; Телегин, Нечитайло, Потехина, Панченко 2001, с.60-61).

On my opinion the main criteria for determination of chronological position of the burials of the Igren and Alexandria cemeteries should be radiocarbon dating and some pots, which had clear cultural-chronological definitions. Radiocarbon dates for burials of Alexandria indicated the Late Eneolithic age of that cemetery (Котова 2003). There are two chronological groups of graves in the Igren cemetery, which are related to the Early and Middle Eneolithic (Котова 2005). The age of the older group was identified by similarity of vessels and flint tools from burials with the materials of the Early Eneolithic Semenovka and Sredniy Stog sites. The radiocarbon dating confirmed the Early Eneolithic age of that burial group.

The second group of the Igren cemetery belonged to the Middle Eneolithic on the basis of similarity of its ceramics with pottery of the Dereivka culture sites and period B II of the Tripolye culture. That age was confirmed by radiocarbon date for one of burial, which determined its age about 4100 BC.

As a whole, more then 30 monuments of the Early Eneolithic are known in the steppe Ukraine. D.Y.Telegin listed about 131 monuments of the Sredniy Stog culture (Телегин, Нечитайло, Потехина, Панченко 2001), including settlements and burials of the Middle Eneolithic, which I incorporate in the Dereivka culture and don't analyze in this book. Reliable materials of the Early Eneolithic have been found at 18 settlements and 13 burial monuments. The direct stratigraphy of the Early Eneolithic layers was fixed only at the Kamennaja Mogila, Sredniy Stog, Strilcha Skelja and Semenovka sites.

Moreover, materials of another territories, which are closely connected with the steppe Eneolithic of Ukraine, are used in this book. Some of them don't published in a full measure, especially settlements and burials of the Lower Don. These circumstances prevent me from giving their detailed characterization.

Separate hoards of flint artifacts, including large flint blades and axes, are often connected with the Early Eneolithic (Телегин, Нечитайло, Потехина, Панченко 2001). But this kind of monuments will not be examined in this book, because of the vagueness of their cultural and chronological position.

Radiocarbon method plays an important role in studying of the Early Eneolithic of Pontic steppe. First of all, I based my conclusions on new series of dates and synchronization with sites of the Tripolye culture, which have a huge number of new dates. I considered only those dates, which were made with the help of new method at Kiev radicarbon laboratory and dates of Oxford laboratory. As a comparison has shown, the analyses made in Kiev and Leningrad laboratories on the basis of old method were really rejuvenated.

Anthropological, palynological, paleobotanical and archeozoological data were used for the reconstruction of elements of social and economical activities of the Early Eneolithic steppe population.

1.2. CLASSIFICATION OF CERAMICS

The most numerous material on the Eneolithic steppe settlements is ceramics. It is impossible to use for its analysis the majority of

classifications, created on the basis of intact forms of pottery, because of its considerable fragmentation. The most informative for studying of the settlement collections are the fragments of upper parts of vessels, which include remains of rims, necks and shoulders. I proposed the following classification for upper parts of vessels, based on their qualitative and quantitative characteristics. It helps to make description of settlement ceramics more complete and detailed.

Only one form of vessels – pots – is known during the Early Eneolithic in steppe zone. Among them we can distinguish three main groups by direction of neck bending (fig. 2).

1. Pots with outturned neck (fig.2: 1-6).

2. Pots with vertical neck (fig.2: 7, 8).

3. Pots with indrawn neck (fig.2: 9, 10).

The pots are also divided into two groups according smoothness and sharpness of their necks bending.

1. Pots with the sharp transition from neck to shoulder. “Sharp transition” means that there is an angle between line of neck and line of shoulder (fig. 2: 1-3, 7, 9).

2. Pots with smooth transition from neck to shoulder. “Smooth transition” means that there is rounded bend between line of neck and line of shoulder (fig. 2: 4-6, 8, 10).

In the case of the most preserved pots with outturned neck we can determine the ratio of the rim and body diameters. On the basis of it, we can distinguish the following groups (fig. 2: 1-6):

1. Pots, which diameter of body is bigger than diameter of rim (fig.2: 1, 4)

2. Pots, which diameter of body is equal to diameter of rim (fig.2: 2, 5)

2 Pots, which diameter of rim is bigger than diameter of body (fig.2: 3, 6)

We can also distinguish the following variations of pot necks (fig. 3: 1-4)

1. Straight neck without any changes of its form (fig.3: 1).

2. Neck with the groove inside the vessel. Groove is situated in the middle part of neck (fig.3: 2).

3. Neck with the groove inside the vessel. Groove is situated in the lower part of neck (fig.3: 3).

4. Neck with the groove outside the vessel. Groove is situated in the middle part of neck (рис.3: 4).

Several variants of the rim design are also distinguished (рис.3: 5-8).

1. Convergent upward and rounded rim (fig.3: 5).

2. Straight rim (fig.3: 6).

3. Oblique inward rim (fig.3: 7).

4. Oblique outward rim (fig.3: 8).

I also distinguished four variants on the basis of additional rim design (fig.3: 9-12).

1. Rims without additional changes (fig.3: 9).

2. Rims with ledges outward and inward (fig.3: 10).

3. Rims with ledge inward (fig.3: 11).

4. Rims with ledge outward (fig.3: 12).

Some variants are distinguished on the basis of neck thickness, too (fig.3: 13-16).

1. Neck, which is uniform across the width (fig.3: 13).

2. Neck, which widen upward (fig.3: 14).

3. Neck, which converge upward (fig.3: 15).

4. Neck, which is thickened from the outside (fig.3: 16).

During analysis of pottery, the presence or absence of collar on the neck of vessel was also considered. Term “collar” regarded to bulge on the outer side of vessel, which ends by ledge in the lower part of neck.

For designation of ornamental elements the next terms were used: “**caterpillar**” – short imprints of stamp from cord, coiled on stick or rope; **interweaved cord** - long imprints of stamp from cord, coiled on stick or rope; **pit** – imprint of stamp, which is perpendicular to the surface of vessel; **stroke** – imprint of stamp, made under an angle to the surface of vessel; **oval stroke** - imprint of oval stamp, made under an angle to the surface of vessel; **paired stroke** – stroke, made by stamp with two ledges; **bracket** – imprint made by flat stamp under an angle to the surface of vessel.

In the case of description of ornamentation, the term “element of ornamentation” relates to stroke, drawn line, comb imprint, pit. Term “element of composition” is related to groups of ornamentation elements, which form rows, lines, zigzags, etc.

Sometimes surface of the Eneolithic pottery in addition to ornamentation was covered with hatching, made by comb stamp. This hatching is shown on illustrations. In some cases it was smoothed, even if there are some traces of it on the surface of vessel. In these cases, the hatching is not shown on illustrations.

CHAPTER 2. EARLY ENEOLITHIC SETTLEMENTS

The Early Eneolithic settlements are known in three steppe regions: steppe Dnieper basin, Azov Sea area and Severskiy Donets basin.

2.1. STEPPE DNIEPER BASIN

It should begin description of settlements from the eponimic Sredniy Stog site and the most numerous materials of the Strilcha Skelja site, which allow us to compare collections of other multiplayer monuments with them.

SREDNIY STOG

Multilayer settlement is situated on the island of the same name on Dnieper in the borders of Zaporozhie. It was investigated by A.V.Dobrovolskiy in 1927 (Добровольский 1929). Sredniy Stog island is the medium of three small rocky isles, which are called “Three Stogs”. They are situated upstream from the largest of Dnieper isles – Khortitsa (fig.4: 1). Before building of Dnieper hydroelectric power station and during spring high water, rocks of “Three Stogs” were isles. After abatement of water, they become connected with Khortitsa with a sandbank and, perhaps, were used for the crossing of Dnieper (Добровольский 1929, с.104-105).

There was a small area, slightly concaved in the middle, which size was for about 150 square meters in the middle of Sredniy Stog island. It was overlapped by sand (fig.4: 2). Four heaps of shells (A, A1, A2, A3) with materials of the second period of Azov-Dnieper culture were found there (fig. 4: 5, 6). There was a sterile layer of sand between heaps A1-3 and the second cultural layer. The second cultural layer was directly on the heap A and the same heap entered into the second layer, which partially overlapped it from the sides.

The second cultural layer overlapped the whole area and was represented by humus sand with thickness of 15-20 cm. It divided into three parts. Each of them had its thickness for about 6 cm. The middle part was the lightest. There were a stone axe and stone for polishing in the upper part of humus sand. Only remains of bones, including large parts of jaws with teeth, horns and the whole dog scull were found in the middle part. It is interesting, that fish bones were found only in the lower and upper parts of humus sand.

Unfortunately, collection of this site is not preserved completely, especially flint wares. Now a part of collection is kept in the National Museum of History of Ukraine. Codification of finds does not allow us to identify, in which part of humus sand they were found. Following A.V.Dobrovolskiy, I am able to give only a general description of finds of the second layer.

Preserved part of collection includes remains of 45 vessels. They were made of clay with shell admixture. Inner and, frequently, outer surfaces were smoothed down with the combed stamp. Remains of 35 vessels preserved more or less completely and we base all descriptions of ceramic complex on them. In addition to them, fragments of other vessels are also shown on illustrations.

Pottery is represented by strongly profiled pots with point bottoms (fig.5: 3, 5, 6, 8). The majority of vessels had high necks (about 4-5 cm, Table 1).

Vessels with outer outturned neck, which have a groove inside, are dominating in collection (Table 2, fig.6: 1-5, fig.7:2, 4-6, fig.8: 1, 2, fig.9: 1, 2, 6, 7, fig.10:2, 5-7, fig.11, fig.12: 13, 14). Pots with outer outturned direct neck are rare (fig.5: 1, 3, fig.6: 5, fig.7: 4, fig.9: 4, 5, fig.10: 3,

4, 9). Other forms of pots are represented by separate finds, such as pots with vertical grooved neck (fig.7: 1, fig.8: 2), vertical direct neck (fig.9: 8, fig.12: 12), indrawn and grooved neck (fig.9: 3). Three pots have collars (fig.8: 2, fig.9: 8, fig.10: 4).

Table 1. Distribution of profiled pots accordingly heights of their necks at the settlements

Settlement	0-1,9 cm	2-2,9 cm	3-3,9 cm	4-4,9 cm	5-5,9 cm	6-6,9 cm	In all
Sredniy Stog	-	7-20%	7-20%	11-31%	9-26%	1-3%	35
Strilcha Skelja, the forth layer	-	3-19%	7-38%	5-31%	1-6%	1-6%	17
Strilcha Skelja, the third layer	1-5%	6-29%	8-38%	4-19%	2-10%	-	21
Alexandrija	-	2-33%	1-17%	3-50%	-	-	6

Table 2. Distribution of profiled pots accordingly shape of their necks at the settlements

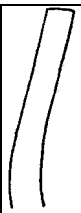
	Profiled pots with outturned neck							
Settlement								
Sredniy Stog	8 - 23%	1 - 3%	-	21 - 60%	2 – 6%	-	-	-
Strilcha Skelja, the forth layer	4 - 24%	1 - 6%	-	7 - 30%	-	1 – 6%	-	-
Strilcha Skelja, the third layer	6 - 26%	1 – 4%	-	4 - 17%	-	-	1 - 4%	2 - 9%
Alexandrija	2 - 33%	-	1 - 17%	1 - 17%	-	-	-	-

Table 2. Continuation

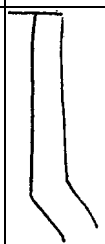
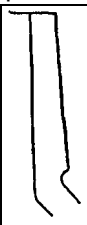
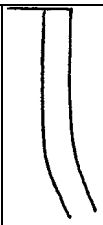
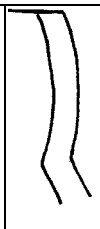
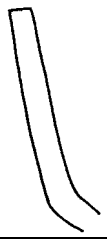
	Profiled pots with vertical neck					
Settlement						
Sredniy Stog	1 - 3%	1 - 3%	-	1 - 3%	-	-
Strilcha Skelja, the forth layer	1 - 6%	-	-	2 - 12%	-	-
Strilcha Skelja, the third layer	1 - 4%	-	1 - 4%	3 - 13%	1 - 4%	1 - 4%
Alexandrija	-	-	-	2 - 33%	-	-

Table 2. Continuation

	Profiled pots with indrawn neck			
Settlement				In all
Sredniy Stog	-	-	-	35
Strilcha Skelja, the forth layer	-	1 - 6%	-	17
Strilcha Skelja, the third layer	1 - 4%		1 - 4%	23
Alexandrija	-	-	-	6

The majority of vessels had an oblique inward rim (Table 3) without any additional changes (Table 4, fig.6: 1, 3, 4, 6, fig.7: 4, 5, fig.8: 1, 2, fig.9: 1, 2, 4, 5, fig.10: 3, 4, 6, 7, 9, fig.11: 1-3, fig.12: 12-14). The pots with oblique inward rim, which has a ledge inward (fig.7: 2, 6, fig.11: 4), the pots with convergent upward and rounded rim (fig.5: 1, 3, fig.9: 6, fig.10: 5) and the pots with straight rim (fig.6: 5, fig.7: 2, fig.9: 7, 8, fig.10: 2) are not numerous.

Table 3. Distribution of profiled pots accordingly shape of their rims at the settlements

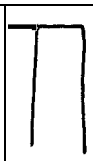
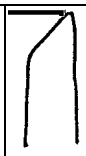
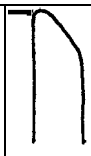
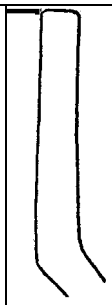
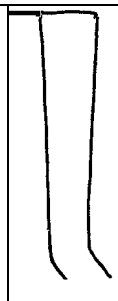
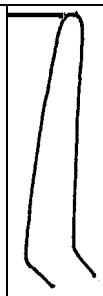
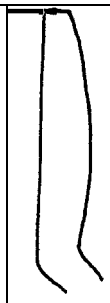
Settlement					In all
Sredniy Stog	4 - 11%	5 - 14%	26 - 74%	-	35
Strilcha Skelja, the forth layer	2 - 13%	4 - 24%	9 - 53%	2 - 13%	17
Strilcha Skelja, the third layer	5 - 22%	11 - 48%	4 - 17%	3 – 13%	23
Alexandrija	1 - 17%	3 - 50%	1 - 17%	1 – 17%	6

Table 4. Distribution of profiled pots accordingly an additional rim design

Settlement	Rims without additional changes	Rims with ledges outward and inward	Rims with ledge inward	Rims with ledge outward	In all
Sredniy Stog	32 - 91%	-	3 - 9%	-	35
Strilcha Skelja, the forth layer	14 - 82%	-	1 - 6%	2 – 12%	17
Strilcha Skelja, the third layer	18- 78%	1 - 4%	4 - 17%	–	23
Alexandrija	4 - 66%	-	1 - 17%	1 – 17%	6

Neck was usually uniform across the width (Table 5, fig.5: 3, fig.6: 1, 3, fig.7: 1, 6, fig.8: 1, 2, fig.10: 2, 4, 6, 7, fig. 11: 1-3), but there were some pots with necks, which converged upward (fig.6: 5, fig.7: 2, 4, fig.9: 1, 2, 7, 8, fig.10: 3, fig.12: 13, 14) and necks, which were thickened from outer side (fig.5: 1, fig.6: 6, fig.7: 5, fig.9: 4, 5, 6, fig.10: 5, fig.12: 12). Two pots had necks, which widen upward (fig.10: 9, fig.11: 4).

Table 5. Distribution of profiled pots accordingly a neck thickness

Settlement					In all
Sredniy Stog	14 - 40%	2 - 6%	11 – 31%	8 – 23%	35
Strilcha Skelja, the forth layer	3 - 18%	1 - 6%	7 - 41%	6 – 35%	17
Strilcha Skelja, the third layer	10 - 43%	6 - 26%	5 - 22%	2 - 9%	23
Alexandrija	5 - 83%		1 - 17%		6

All the pots were ornamented. Near 60% of them were decorated with combed imprints (Table 6). They formed horizontal lines (fig.6: 4, 6) and horizontal rows of slantwise imprints (fig.10: 4, 7, 9), combinations of lines with rows (fig.7: 1, 5, fig.8: 2, 4, 5), zigzags (fig.9: 3-6) or triangles (fig.9: 7, 8).

Table 6. Distribution of the main ornamental elements on the pottery of the Eneolithic settlements

	Sredniy Stog	Strilcha Skelja, the forth layer	Strilcha Skelja, the third layer	Alexandrija
Without ornamentation	-	3 - 16%	4 - 17%	-
Comb imprints	21 - 60%	10 - 56%	1 - 4%	-
Strokes-bracket	2 - 6%	2 - 11%	5- 21%	2 - 33%
Drawn lines	-	-	3 - 13%	1 - 17%
interweaved cord	2 - 6%	2 - 11%	-	-
“caterpillar”	6 - 17%	1 - 6%	-	-
Strokes and drawn lines	-	-	9 - 37%	2 - 33%
Strokes and pits			-	1 - 17%
Comb imprints and drawn lines	4 - 11%	-	2 - 8%	-
In all	**35**	**18**	**24**	**6**

Six pots were decorated with imprints of “caterpillar”, which formed horizontal lines and rows of imprints in conjunction with zigzag (fig.11: fig.12: 12, 13, 14). Two pots were ornamented with imprints of interweaved cord in form of horizontal lines (fig.6: 5) and their conjunctions with row of slantwise imprints (fig.12: 11). A.V.Dobrovolskiy mentioned, that pottery with interweaved cord was found only in upper horizon of humus sand (Добровольський 1929, с.134).

Four pots were decorated with combination of comb imprints and drawn lines, which formed compositions from horizontal lines and rows of slantwise imprints (fig.7: 2-4, 6). This composition was traditional for this site.

Strokes were used for ornamentation of two pots (fig.5: 1, 3). Small fragment of rim was also decorated with them (fig.5: 7). Perhaps, one vessel from settlement was ornamented with drawn lines and strokes (fig.5: 2)

The majority of pots had ornamentation on the neck and upper part of body. Only two vessels had no decoration on their necks (Table 7).

Table 7. Distribution of decorated pots without ornamentation on necks at the Eneolithic settlements

Settlement	pots without ornamentation on necks	**In all**
Sredniy Stog	2-6%	**35**
Strilcha Skelja, the forth layer	2-11%	**17**
Strilcha Skelja, the third layer	10-43%	**24**
Alexandrija	-	**6**

80% of vessels had ornamentation on the upper part of neck. It consisted from two or three decoration elements (Table 8). Two elements were formed by combination of horizontal line and row (fig.6: 2, fig.7: 4) or two horizontal lines (fig.10: 1-3, 5). Three elements consisted of two horizontal lines and row (fig.6: 1, fig.7: 1, 3, 5, 6); row, line and zigzag (fig.9: 1, 2) or two lines and zigzag (fig.9: 5). Sometimes there was only one element on upper edge of neck or even four or more elements. One element is represented by row of rectangular strokes (fig.5: 7) or slantwise comb imprints (fig.10: 4, 7, 9). Compositions on the upper part of the neck consisted of more than three elements, which formed by several lines (fig.10: 6) or their combinations with some zigzags (fig.9: 3, 4).

Table 8. Distribution of pots with different number of composition elements of ornamentation on the upper part of the neck

Settlement	One element	Two elements	Three elements	More than three elements	All pots with ornaments on the upper part of the neck	**In all**
Sredniy Stog	4-11%	9-26%	10-29%	5-14%	28-80%	**35**
Strilcha Skelja, the forth layer	4-23%	2-11%	2-11%	3-16%	11-61%	**17**
Strilcha Skelja, the third layer	2-8%	1-4%			3-12%	**24**
Alexandrija	-	-	-	-	-	**6**

77% of pots had their ornamentation on the rim (fig.6, Table 9).

Table 9. Distribution of pots with ornament on the rim

Settlement	pots with ornament on the rims	In all
Sredniy Stog	27 - 77%	35
Strilcha Skelja, the forth layer	9 - 50%	17
Strilcha Skelja, the third layer	16 - 70%	23
Alexandrija	4 - 67%	6

There were also three fragments of the Tripolye culture ceramics in the second cultural layer. Unfortunately, they were not preserved.

The collection included 423 flint objects. Among them were 339 blades without retouch, 42 blades with retouch. 42 fragments of blades also had

retouch. The majority of blades was represented by medium blades (width from 1 to 2,4 cm), while some of them had their width larger, than 2,4 cm. The longest blade was near 10 cm. There were 33 scrapers and their fragments, but only six of them preserved. There were two end scrapers (fig.13: 3, 8, 9) and two end-side scrapers (fig.13: 6, 12). Two fan-like scrapers were made on flakes (fig.13: 7, 10). According to A.V.Dobrovolskiy, the majority of other scrapers was made of flakes and had rounded working edge (27 scrapers), while six scrapers had slantwise working edge. Perhaps, A.V.Dobrovolskiy included in that group combined tool – borer-scraper (fig.13: 5). There were 12 arrowheads in the collection. They had triangular form with the concaved or slightly bulging bases (fig.12: 1-10).

In addition, there were 13 bone awls and fish-hook in the second layer.

STRILCHA SKELYA

Strilcha Skelya is a granite isle in the Dnieper, which is located opposite to the village of Voloshskoe in Dnepropetrovsk district. Multilayer settlement is localized in the eastern part of isle in hollow with area about 400 m². Rocks surrounded this hollow from three sides. The settlement was excavated by A.V.Bodjanskiy, V.N.Danilenko and A.V.Dobrovolskiy in 1946. Investigations were continued by D.Y.Telegin in 1986 and by I.F.Kovaljova in 1989.

On V.N.Danilenko's opinion, six cultural layers are represented at the settlement (Даниленко 1974, с.47). Materials of the Sredniy Stog culture were discovered below the Yamnaja and Catacombnaja cultures layers. Three next layers were recognized due to originality of pottery; there are no direct stratigraphical data witnesses to the reality of their existence. Accordingly to V.N.Danilenko, under the Sredniy Stog culture layer there were materials of final stage of the Surskaja culture overlaying the materials of the second period of Azov-Dnieper culture. The Surskaja culture materials again appeared in the lowest stratum of the site.

Another stratigraphy was reconstructed by L.F.Konstantinesku and D.Y.Telegin (Телегин, Константинеску 1992, с.13-14). To their opinion, the upper layer of the site contains materials of the Yamnaja culture; below it there were materials of the Sredniy Stog culture. The layer of Nadporozhskaja culture (the Azov-Dnieper culture in my terminology) underlies above mentioned horizons and overlies the layer of Surskaja culture.

Materials from the excavations of A.V.Bodjanskiy, V.N.Danilenko, A.V.Dobrovolskiy and D.Y.Telegin are used in given work. The analysis of depth of deposition of finds shows the lack of exact stratigraphy in the majority of excavated squares. Unfortunately, the settlement was investigated mainly by means of conventional horizons, which average thickness was about 20 cm. Exact stratigraphical position of finds was complicated by such manner of excavation. Must be stressed additionally, that only V.N.Danilenko and D.Y.Telegin marked depth of artefacts. A.V.Dobrovolskiy gave only alphabetical designation of the soil layer, in which the artefact was found. As result, only pottery might be used for re-examination, due to its typological expressiveness. Sondages of 1986 year provide the most precise positioning of finds. In general, settlement is characterized by following stratigraphy:

1. Humus layer with thickness of 15-20 cm with materials of the Srubnaja, Catacombnaja and Yamnaja cultures.

2. Dark-brown sand. Its upper part contains the materials of the Sredniy Stog culture. There was, mainly, ceramics of the Sredny Stog type in upper part. It was found on depth of 60-80 cm in the sondage 1 (1986 year), while in the sondage 2 (1986 year) it was on the depth of 10-30 cm. Peculiar materials were found under it in middle part of dark-brown sand, which could be called as "Skeljanskiy complex". They were found on the depth of 80-140 cm in the sondage

1 (1986 year), while in the sondage 2 (1986 year) they were on the depth of 50-60 cm.

Lower part of the dark-brown sand included materials of the second period of Azov-Dnieper culture.

3. Dark-brown sand overlies the concentration of *Unio* in northern part of the settlement and the concentration of *Paludinae* (fig.14: 1) in its southern area. According to V.N.Danilenko, concentration of *Unio* partly overlies concentration of *Paludinae*. Materials of the second period of Azov-Dnieper culture were also found among *Unio* shells.

4. Laying immediately on rock, brown sand with thickness of 10-15 cm was fixed below the concentrations of shell. Materials of the Surskaja culture are associated with brown sand, as well as with concentration of *Paludinae*.

The first layer is referred to the Late Surskaja culture (Kotova 2003). **The second layer** includes materials of the second period of Azov-Dnieper culture. These materials were concentrated in southern part of the settlement. Remains of about 40 vessels were found. Their clay tempered with sand, sand in combination with vegetation, and sand in combination with pounded shell. Pottery has flat bottoms, rounded or biconical bodies. The majority of vessels are decorated with strokes ornamentation.

There is radiocarbon date (6200±65 BP; Ki-8174) for animal bone from the second layer.

The third cultural layer (fig.14: 1) includes the Eneolithic materials, which belong to the Skeljanskaja stage of Yamnaja culture (according to V.N.Danilenko 1974) and the Skeljanskaja culture (according to Y.Y.Rassamakin 1999). Remains of 25 vessels with sharp bottoms preserved. They were made of clay with shell inclusions. Inner surface was smoothed down by comb stamps, which left horizontal hatching. Some vessels had traces of horizontal smoothing with comb stamps even on outer side.

We have the most detailed description of 24 pots. The majority of them had rim diameter smaller, than diameter of body (fig.15, fig.16: 1, 3, fig.17: 1, 5, fig.18: 7, fig.19: 1, 4), while height of neck varied from 3 to 4 cm (Table 1). Vessels with outturned neck and sharp transition from neck to shoulder (Table 2, fig.15: 1, fig.16: 2, fig.17: 1, 2, fig.18: 3, fig.19: 1, 4) are prevailed, as well, as sharply profiled pots with outturned grooved neck (fig.14: 12, fig.15: 2, fig.17: 4, 6, fig.18: 4, 6).

Pots with vertical grooved (fig.16: 1, fig.18: 7, fig.19: 3) or straight necks (fig.16: 3, fig.19: 2) are not so numerous. We know only separate pots with S - profile (fig.15: 3, fig.18: 1, fig.19: 6). Only three pots had collar on their necks (fig.15: 3, fig.17: 6, fig.19: 4).

The majority of pots had neck, which is uniform across the width (Table 5, fig.15: 2, 3, fig.17: 4, 5, fig.18: 7, fig.19: 1-4, 6, 7). Sometimes, there were vessels with necks, which converge upward (fig.14: 12, fig.15: 2, 3, fig.17: 1, fig.18: 1, fig.19: 5) or necks, which widen upward (fig.16: 2, 3, fig.17: 2, 6, fig.18: 3, 6). Only two pots had necks, which were thickened from the outside (fig.16: 1, fig.18: 4).

Pots with rims, which were cut straight, dominated in this layer (Table 3, fig.15: 2, fig.16: 1, 2, fig.17: 2, 4, 6, fig.18: 1, 3, 4, 6, fig.19: 1, 5). There were some pots with oval (fig.15: 1, fig.17: 1, 5, fig.18: 3, fig.19: 2, 4), oblique inward rims (fig.16: 3, fig.19: 6) or oblique outward rim (fig.18: 7, fig.19: 3, 7).

The majority of vessels had no additional changes of the rim (Table 4). Pots with a ledge on inner side of rim (fig.16: 2, 3, fig.17: 2, fig.19: 7) or with ledges outward and inward are not numerous (fig.19: 5).

Fragments of four vessels had no ornamentation (fig.16: 1-3, 6, 10). Other pots were ornamented, mainly, on upper part of body, neck and rim. A wide

variety of ornamental elements, which include drawn lines, strokes, pits, comb imprints and different combinations of those elements (Table 6), is the specific feature of the pottery of this layer.

Drawn lines were located upright (fig.16: 1) and horizontal (fig.18: 1), as well as formed zigzag (fig.18: 3, 4), wave (fig.18: 2), herring-bone (fig.18: 7), hatched areas with zigzags (fig.18: 5), ovals with horizontal lines (fig.18: 6). Compositions of some horizontal drawn lines on shoulders of vessels, from which hatched triangles (fig.15: 2, fig.16: 3-5, fig.18: 9), arches (fig.16: 6), zigzags (fig.16: 7), quadrangular figures (fig.15: 3, fig.17: 7) hung down, were wide distributed. Sometimes, drawn patterns were framed by oval or triangular strokes.

Strokes ornamentation is also quite frequent. Oval (fig.17: 1-3), triangular (fig.17: 4, 6) or bracket-like (fig.15: 1, fig.18: 8) strokes formed horizontal and vertical lines, waves, hatched triangles and zigzags.

Three vessels were decorated with comb imprints, which formed vertical, horizontal and diagonal rows (fig.19: 4, 6, 7).

Eighteen pots had ornamentation on the rims. Strokes decorated the rims of seven pots (fig.15: 2, 3), while notches decorated the rims of eight pots (fig.15: 1). Only three vessels had their rims ornamented with comb imprints (fig.17: 6, fig.18: 1, fig.19: 3).

A group of flint tools is correlated with the third layer. They were made of gray-brown transparent flint. Among them, we should mention a fragment of flake with a retouch (fig.20: 1), intact blade (fig.20: 4) and distal end of blade with a retouch (fig.20: 3), as well, as a leaf-shaped tool (fig.20: 6). A bone blade with a hole was found in that layer (fig.20: 5).

Clay sand soil does not allow me to relate the majority of flint artifacts with definite layers. The Azov-Dnieper pottery from the second layer and the Sredniy Stog ceramics from the third layer, as well as flint tools, were found on the same depth in some squares. These flint objects are distinguished into the mixed complex, which included bone adze (fig.21: 2), fragment of polished axe (fig.21: 1), broken bifacial point (fig.21: 4) and a separate heap of flint artifacts. This heap includes three intact flakes with a retouch and one fragmented (fig.22: 4), 13 intact and three fragmented flakes with traces of usage (fig.22: 1, 3), two proximal ends of wide blades with a retouch (fig.22: 2, 6), fragment of tool and end-side scraper of lancet form (fig.22: 5). Practically all objects were made of gray-brown transparent flint.

We also should attribute to this mixed complex such flint artifacts from other squares of settlement as four flakes with traces of using, two flakes with a retouch, four flakes without a retouch, fragment of flint, two fragments of tools (fig.22: 10), distal end of wide blade with a retouch (fig.22: 3), end scraper on flake (fig.22: 6), side scraper on flake (fig.22: 8), end-side scraper on flake (fig.22: 9), end-side fan-like scraper on blade (fig.22: 5).

For the third layer a radiocarbon data 5630±70 BP (Ki-8173) was made for animal bone, which allows us to determine its age about 4445 BC.

The fourth cultural layer is represented with materials, which is similar to the second layer of the Sredniy Stog site. It includes remains of 17 vessels with sharp bottoms. They were made of clay with pounded shells and their inside surfaces were smoothed down with comb stamp, mainly in a horizontal direction. Some vessels had traces of vertical smoothening with comb stamp on outer surface.

Pots with neck height from 3 to 5 cm (Table 1) and maximum diameter in upper part of body dominate in collection. Vessels with grooved (Table 2, fig.14: 12, fig.23: 2, 3, 5-7, fig.24: 7) or straight outturned necks (fig.23: 3, 8, 10, 11, fig.24: 3, 9) are the most numerous. There are separate pots with vertical straight necks (fig.23: 4) and grooved necks (fig.24: 1, fig.25: 10),

as well as sharply outturned necks, which had a groove inside of its lower part (fig.23: 1). Only one vessel had a collar (fig.23: 8).

The majority of vessels had their necks smoothly thickened from the outside (Table 5, fig.23: 1, 3, 5, 10, 11, fig.24: 9) or converged upward (fig.23: 4, 7, fig.24: 3, 7, fig.25: 10).

Vessels with oblique inward rims dominated in collection (Table 3, fig.23: 2, 3, 5-8, 10, fig.24: 1). Additional changes of rim are not typical for this layer (Table 4).

Three pots had no ornamentation. Ten vessels were decorated with imprints of comb, mainly, long stamps (Table 6). These imprints form horizontal lines (fig.23: 7, 10, fig.24: 5), lines in conjunction with horizontal rows (fig.23: 5, 6, 8, 11), lines in conjunction with semicircular figures, which are filled with comb imprints (fig.24: 6, 8).

Ornamentation of two pots consists of imprints of interweaved cord (fig.24: 1, 3). One vessel is ornamented with imprints of “caterpillar” (fig.24: 2). Fragments of body of vessels, which are not included into statistical calculations, also are decorated with “caterpillar” and interweaved cord (fig.24: 4, 5).

Two pots are ornamented with strokes (fig.24: 13, fig.25: 10).

Nine vessels have ornamentation on the rims (Table 10, fig.23: 3, 5, 8). Sometimes comb or cord imprints are located on the inner side of necks (fig.25: 1, 3, 7).

We can trace some regularity in disposition of ornament. The lowest part of vessel had no ornamentation. The necks of three pots were fully decorated (fig.23: 11, fig.24: 3, 7), but the majority of vessels had ornamentation only on the upper part of necks (Table 8). Decoration consists of one, two, three or four elements. One element is represented by horizontal row of short comb imprints (fig.23: 3, 4) or strokes (fig.24: 13, fig.25: 10); two elements – by two rows of “caterpillar” (fig.24: 2) or one row and one line of comb imprints (fig.23: 6, 8). Three or four elements include horizontal lines of long comb imprints or combination of horizontal lines with the row of comb or interweaved cord imprints (fig.23: 5, 7, 10, 11, fig.24: 1, 9).

We can correlate with this layer perforator on flake (fig.20: 11), section of medium blade with a retouch (рис fig 20: 2), combined tool (perforator – end side scraper) on blade (fig.20: 10), end-side scraper on blade (fig.20: 8) and end scraper on blade (fig.20: 9).

Mixed flint materials from the third and forth layers include three flakes without a retouch, two flakes with a retouch (fig.25: 9), three fragmented blades with a retouch (fig.20: 7, fig.25: 1, 4), double scraper on blade (fig.25: 5), adze on flake (fig.25: 3), perforator on blade (fig.25: 2), end scraper-borer on blade (fig.25: 6) and two scrapers on flakes: end-side scraper (fig.25: 7) and scraper with a retouch around the periphery of it (fig. 25: 8).

The radiocarbon date (5480±70 BP; Ki-8172) was made for animal bone from that layer, which determined its age about 4312 BC.

Five fragments of imported Tripolye pottery were found at the settlement. Two of them – one from black-burnished vessel with flutes (fig.14: 11) and another from vessel with comb dotted ornamentation (fig.14: 9) - were related to the end of Tripolye A – beginning of Tripolye BI by D.Y.Telegin and L.F.Konstantinesku (Телегин, Константинеску 1992, с.23). They connected them with the Surskaja and Azov-Dnieper layers. Fragment of painted Tripolye ceramics was belonged to the Eneolithic layer (fig.14: 10).

Unfortunately, painted fragment and vessel with flutes were found on that part of site, which was excavated by A.V.Dobrovolskiy. As already mentioned above, he did not indicate the depth of artefacts. Fragment of vessel with comb imprints was found in the area, investigated by V.N.Danilenko, but it was

located in a square with badly preserved cultural layer. Therefore we can only presumably correlate the fragments of Tripolye ceramics with cultural layers. According to N.B.Burdo, the vessel with flutes is similar to ceramics of the Tripolye settlement Grenovka (Tripolye BI – Kykyteni A 1-2). Probably, it is related to the third layer of Strilcha Skelja.

Fragment of painted ceramics with black and white painting on the red field is typical for the Tripolye culture of South Bug and Dniester basins in the end of B I-II period (Виноградова 1983, с.80). The forth layer of Strilcha Skelya has the same date, and we should relate this fragment to it.

VINOGRADNYI ISLAND

This island is located on the Dnieper in the opposite of village Privolnoe in Vilnjanka district of Zaporozhye oblast. In 1929-1930 A.V.Dobrovolskiy investigated multilayer settlement and cemetery, which included burials of different epochs. He excavated about 2000 square meters and found the materials of the Neolithic, Eneolithic and Late Bronze Age.

In spite of large excavated area, only a few fragments of Eneolithic ceramics were found. They belonged, perhaps, to 11 vessels, which were made of clay with shell admixture. Two of them with short necks are decorated with lines and pits. Their shapes and ornamentation are very similar to the pottery of the third layer of Strilcha Skelya (fig.26: 1, 2). Other vessels could be related to the Middle Eneolithic.

ZOLOTAJA BALKA

This is a complex monument, which consists of settlements and cemeteries. It existed from the Eneolithic to the Early Iron Age. It was excavated in 1951-1952 by A.V.Dobrovolskiy and 1954-1955 by V.D.Rybalova. This monument is situated near village Zolotaja Balka in Novovoronzovka district of Kherson oblast.

Some fragments of the Eneolithic pottery were found there. They were made of clay with shell admixture and ornamented with comb stamp. Fragments of two vessels find analogies in the materials of the Sredniy Stog site. They have sharply outturned necks, which are thickened from outside, oblique inward rim and comb ornamentation (fig.26: 3, 4).

KIZLEVIY ISLAND is situated on the Dnieper in the opposite of village Alexeevka in Solonansk district of Dnepropetrovsk oblast. Some fragments of the Eneolithic vessels, which were similar to ceramics of the third layer of Strilcha Skelya, have been found there (fig.26: 5-7).

KODACHEK ISLAND

This multilayer settlement is situated on the island near right bank of the Dnieper below the place, where the Samara flows into the Dnieper. It was investigated by A.V.Bodjanskiy in 1946.

Lower layer of monument can be related to the Surskaja culture, while middle layer – to the Azov-Dnieper culture.

Upper layer includes ceramics with shell admixture, which is similar to the pottery of Sredny Stog (fig.27: 1-4, 6, fig.28: 2-4). It is represented with fragments of eight sharply profiled pots with outturned necks, which sometimes had groove. One of them had a collar (fig.27: 4).

Pottery was ornamented with comb imprints (fig.27: 1, 2, 4, 6, fig.28: 3), interweaved cord (fig.27: 3), impressions (fig.28: 2). Comb prints were combined

with imprints of arcuate stamp in the ornamentation of one vessel (fig.28: 4). Perhaps, fragment of vessel with shell admixture and circular bulbs on rim, could be related to this complex (fig.27: 5).

SOBACHKI

Multilayer settlement is situated near village Privolnoe in Verhnehortitsa district of Zaporozhye oblast. It located on the cape of right bank of the Dnieper and was investigated in the 1929 by A.V.Dobrovolskiy.

There was a granite ridge in the cape basement, overlapped by brown humus sand. Numerous materials of the Bronze and Early Iron Ages were found in its upper part. There also were the Neolithic and Eneolithic materials below them. The first layer belongs to the Surskaja culture. The second layer includes the materials of the first period of Azov-Dnieper culture. The third layer is connected with the second period of this culture.

Next layer is related to the Eneolithic and contains remains of five vessels. They had shell admixture in clay. Their inner surface was smoothed down with comb stamp in horizontal direction. One vessel is similar to ceramics of Sredny Stog (fig.28: 5). It has high neck, which is thickened from the outside. Its oblique inward rim is decorated with comb imprints. Upper part of the neck and shoulder of vessel are ornamented with long comb imprints.

2.2. AZOV SEA AREA

KAMENNAJA MOGILA 1

Multilayer settlement was discovered near the village Terpenie in Melitopol district, Zaporozhye oblast. It locates on the first terrace of the right bank of former bed of the Molochnaya. The settlement was investigated in 1936 and 1938 by O.N.Bader; in 1947, 1969-1973 by V.N.Danilenko; and in 1983 and 1987 by D.Y.Telegin. Unfortunately, there is no an exact information about Danilenko's excavation in the early 70-th.

Each scholar gave his own description of geological and archaeological layers. Schemes proposed by V.N.Danilenko (Даниленко 1974, с.41-43; 1986, с.13) and D.Y.Telegin (Телегин 1990а) are the most widely known. I have already analyzed and compared them (Kotova 2003). Main attention in my book is focused on the Eneolithic materials, which were widely used in different cultural-chronological schemes. Majority of researchers depends on V.N.Danilenko's descriptions. Unfortunately, they are rather contradictory. For example, at first he distinguished three Eneolithic layers at Kamennaja Mogila 1 (Даниленко 1974, с.41, 42), but in another book he mentioned only two layers (Даниленко 1986, с.13).

All archive materials and collections were carefully studied during the preparation of my book. The first point, which must be stressed, is the paucity of pottery. Its quantity is far less than it might be imagined from V.N.Danilenko' books. Illustrations in my book contain practically all fragments of rims and ornamented sherds, which stratigraphical position can be restored (fig.29, fig.30). That ceramics was also correlated with concrete geological layers. Following picture of stratigraphical sequence of the site was appeared as a result of those efforts.

Beneath the layer of modern soil the subsoil - homogeneous humus sandy-loamy soil - with the Bronze Age materials is distinguished. Transition between humus sandy-loamy soil and underlying loamy soil is rather uneven. It was difficult to define during excavations, to which of these two horizons artefacts were referred. According to V.N.Danilenko's drafts, there was one Eneolithic sherd in lower part of humus clay sand (fig.29: 3), while at the interfaces between clay sand and loamy soil two fragments were found (fig.29: 1, 9).

Under humus sandy-loamy soil a dark gray loamy soil with whitish layer in the middle part is traced. The majority of the Eneolithic pottery was recovered in the upper third of that soil above whitish layer (fig.29: 4, 6-8, 10-12, 16, 17, 19, 20). Two Eneolithic scherds were found directly above whitish layer (fig.29: 13, 18), as well as, not numerous fragments of the second period of Azov-Dnieper culture (fig.30: 9, 4).

Whitish layer of dark-gray loamy soil is connected with the second period of Azov-Dnieper culture (fig.30). Following radiocarbon dates were obtained for animal bones from that layer: 6120±80 BP (Ki-4023), 6180±90 BP (Ki-4024) and 6376±60 BP (Ki-4025). Judging by these dates, the layer of the Azov-Dnieper culture is dated about 5150-5050 BC.

Thus, the study of monument shows, that there are three Eneolithic layers. The lowest stratum is represented by the materials of the Early Eneolithic, which could be related to the second period of Azov-Dnieper culture. The second stratum belongs to the Sredniy Stog culture and includes the pottery with shell admixture, strokes and lines ornamentation. It is located above whitish soil layer (fig.29: 10-14, 16-19). The materials of this stratum are found the closest analogies in the third layer of Strilcha Skelya. Two radiocarbon dates were made for animal bones of that stratum: 5590±70 BP (Ki-7666) and 5630 BP (Телегин 1990). They indicate, that there was a site about 4600-4500 BC.

The third Eneolithic layer is located in the upper part of dark-gray loamy soil immediately under humus clay sand. It includes vessels with quite high necks, hatching on outer and inner surfaces, comb and impression ornamentation (fig.29: 1-9, 20). These vessels are similar to the pottery of the Dereivka site, and they can be related to the Middle Eneolithic.

RAZDOLNOE

Multilayer settlement with the materials from the Neolithic to the Middle Age is situated near village Razdolnoe in Starobeshevo district of Donetsk oblast on the first terrace of right bank of the Kalmius (fig.31: 1). General area of monument is about 5000 square meters. It was excavated by O.G.Shaposhnikova in 1963-1965, N.S.Kotova and O.V.Tuboltzev in the 1991. Complex study of this settlement by joint expedition of V.N.Gorbov, A.N.Ysachyk and N.S.Kotova began in 1998. For this moment, V.N.Gorbov and A.N.Ysachyk finished their investigation of the Bronze Age layer. Author and S.M.Degermenzhi are still working on the Neolithic and Eneolithic layers and therefore only preliminary publication of materials is prepared. For this moment, the Eneolithic and Neolithic layers are excavated on area about 400 square meters.

The following stratigraphy was traced on the settlement:

1. Turf layer with thickness of 20 cm overlapped chernozem layer with thickness of 1 m. There were materials of the Saltovo-Majatskaja culture in the upper part of it, while stone constructions and materials of the Late Bronze Age were found in the lower part.

2. Light brown loamy soil with thickness about 2 m was found under it, containing materials of Middle Bronze Age in the upper part and materials of the Early Bronze Age and Eneolithic in middle part. There was a layer of the Late Neolithic in the lower part of this loamy soil.

Various areas of this monument have different stratigraphy. For example, in the trench IV under a layer of the Early Bronze Age a stratum of the second period of Azov-Dnieper culture were found. In 2000 in the trench III the author investigated three Eneolithic cultural layers under the stratum of the Early Bronze Age.

The first Eneolithic layer belongs to the second period of Azov-Dnieper culture. It was overlapped by the stratum of the Sredniy Stog culture with ceramics, which find analogies in the third layer of Strilcha Skelja (fig.32: 1,

2). Ceramics was made of clay with pounded shell and represented with non-ornamented sherds, fragments of rim and body. The last was decorated with lines and strokes.

Flint artifacts of that layer were made, mainly, of gray-brown transparent flint. They include two cores (fig.32: 7, 8), medium blades with a retouch and without it (fig.32: 3, 5, 9), fragment of bifacial tool (fig.32: 6), double end scraper on large blade (fig.31: 3), two end-side scrapers on flakes (fig.31: 2, 5), end scraper on flake.

The following dates were made for animal bones from the lower and upper parts of the Sredniy Stog layer: 5825±80 BP (Ki-8004), 5630±90 BP (Ki-8005).

The third layer belongs to the Middle Eneolithic.

An older group of the Sredniy Stog pottery, including remains of eight vessels, was found in the trench V. It was investigated in 1991 and 2000. All these vessels were made of clay with shell admixture. One pot with short vertical neck had a collar and linear ornamentation (fig.33: 1). Rim was decorated with strokes. Another vessel with a grooved vertical neck and rounded body had linear and stroke ornamentation (fig.33: 2-3). Impressions are also on the rim. Non-ornamented sherds and fragments with linear ornamentation belong to the third pot (fig.33: 4-6). Small sherd with comb decoration and fragment with comb zigzag are related to the fourth vessel (fig.33: 7). The fifth pot is represented with non-ornamented sherds of gray-yellow color and horizontal hatching on inner surface.

Flat directional core of (fig.33: 12), end-side scraper on flake (fig.33: 10) and side scraper on flake (fig.33: 11) are connected with this ceramics. Perhaps, object from boar fang (fig.33: 8) and perforated animal tooth (fig.33: 9) are also related to this complex.

These materials find the closest parallels in the fourth layer of the Razdorskoe 1 site on the Lower Don. Their common feature is pottery with shell admixture, low neck and linear ornamentation.

This cultural layer in the trench V was bedded with the cultural layer of the Later Neolithic. Its ceramics combined traces of the Surskaja and Lower Don cultures (Kotova 2003, fig.77). The following radiocarbon dates were made for animal bones of that layer: 6475±80 BP (Ki-8000), 6490±80 BP (Ki-8001), 6550±80 BP (Ki-8002). They indicate, that the age of that layer was about 5500-5400 BC.

RAZDORSKOE 1

Multilayer settlement is situated on the first terrace of the Don right bank near village Razdorskoe in Ust-Donest district of Rostov oblast. It was investigated by V.Y.Kijashko in 1980-1990s (Киящко 1994, с.26-31). Thickness of cultural deposits of settlement is about six meters. Near 420 square meters were excavated.

The first layer relates to the Rakushechniy Jar Neolithic culture. The second and the third layers belong to the Lower Don culture of Mariupol cultural-historical area (Kotova 2003).

The **fourth layer** includes materials of the Early Eneolithic. There were remains of campfires and ochre. Ceramics was made of clay with shell admixture or shell and sand inclusions. It is represented with pots with short necks (fig.34). Pottery was ornamented with strokes (fig.34: 4), lines (fig.34: 5), combinations of lines and strokes (fig.34: 7), long comb imprints (fig.34: 1-3), which were sometimes combined with lines (fig.34: 8).

Tool complex is not numerous. Main raw material is represented with honey-yellow flint. Bifacial tools, scrapers on high flakes and tools on blades are known (fig.35). Bone tools and adornments in form of blades with holes were also found (fig.35: 11-13).

The **fifth layer** was quite thin. Its ceramics was made of clay with shell and sand admixture. The vessels with burnishing surface were found, including a pot with flat bottom and ornamentation, made of vertical wavy lines (fig.36: 7). Row of false pearls is under the rim of one vessel (fig.36: 4).

According V.Y.Kijashko, flint complex changed in that layer (Кияшко 1994). The main raw material was gray mat flint. The majority of tools was made of massive flakes with bifacial handling. Points with straight and slightly concaved bases are known (fig.37: 1-6). There also are metal awls and polished stone tools (fig.37: 9, 10).

V.Y.Kijashko distinguished two horizons in that layer (Кияшко 1994, c.30). He considered the upper horizon as later with typical Sredniy Stog ceramics (fig.36: 1-3).

The sixth layer included a lot of ash and had dark-gray color. It contains materials of the Late Eneolithic Konstantinovka culture.

SEMENOVKA 1

Multilayer settlement is situated 800 m from tuberculosis hospital in Melitopol of Zaporozhye oblast and 3 km from the village Semenovka. The site was discovered by B.D.Mikhailov and investigated by O.V.Tuboltzev and author in 1991-1992 (Kotova, Tuboltzev 1996). The settlement locates on the first terrace of the right bank of the Molochnaya and includes the cultural layers from the Neolithic to the Middle Ages. Unfortunately, the site was partially destroyed by trenches of the second world war. Additionally, during 1970s the Middle Age, Early Iron and Bronze Age cultural layers associated with humus soil were removed away. Only the Neolithic and Eneolithic layers were preserved to the moment of excavation, but their upper horizons were partially redeposited and mixed on some areas, as well.

276 square meters were excavated at that settlement (fig.38: 1). The terrace consisted of two parts: the south-east one was formed on the basis of bedrock loams, while north-west part was associated with sand eminence. Mentioned areas of terrace were divided by small water stream, then dried up and overlaid by products of mudslide.

Geological sequence of the south-east part of the settlement is represented by:

1. Turf layer, thickness 0-0,3 м.

2. Humus loamy soil with lime-stone concretions, thickness 0,25-0,4 м.

3. Light brown loamy soil, thickness 0,1-0,2 м.

4. Intensively humus loamy soil with lime-stone concretions, thickness 0,2-0,4 м.

5. Light loamy soil.

The north-west part of terrace provides following sequence:

1. Turf layer formed on place of removed soil, thickness up to 0,05 м.

2. Light gray humus sandy-loam, thickness 0,1-1 м.

3. Dark gray humus sandy-loam, thickness 0,1-0,8 м.

4. Sand.

The **first stratum** of the site is referred to the Surskaja culture. It is connected with light loamy soil and dark gray sandy-loam.

The **second layer** includes materials of the second period of Azov-Dnieper culture. These materials were recovered in intensively humus loamy soil or in

light gray humus sandy-loam (fig.38: 2-10). A radiocarbon date for animal bone from this layer (6360±70 BP Ki-7679) defines its age about 5350-5300 BC.

The **third layer** of the site has yielded materials of the Sredniy Stog culture. These materials were found in the north-west part of the settlement in the upper part of light-gray humus sandy loam or of intensive humus loam with limestone concretions in the south-east one.

About 100 sherds, probably, from 14 vessels were found there. They were made of shell-tempered clay and represented by fragments of beaker and pointed-based pots. Its surfaces are smoothed with comb stamps.

A little beaker with 12 cm in diameter is ornamented with twisted comb imprints (fig.39: 11). Another vessel is decorated with similar ornament (fig.39: 6-8). An interesting ornamentation of third pot consists of short and long comb impressions (fig.39: 9, 10). One or two vessels are adorned with shot comb imprints (fig.40: 3, 6). Two horizontal lines of comb imprints are presented on the neck of vessel with inward curved upper edge (fig.40: 1). A pot with straight rim has incisions on it and is decorated with small oval stabs (fig.39: 12). Oval stabs are presented on the fragments of another vessel (fig.39: 1). Fragments of two vessels are adorned with horizontal rows of sub-triangular and oval stabs (fig.39: 2, 3). One or two vessels are decorated with vertical incised lines in shape of triangle or fir-tree (fig.39: 4, 5). Two pots have no decoration (fig.40: 5, 7).

Artifacts from the third layer are manufactured of brown, yellow and green flint. Two proximal and one mesial fragments of blades (fig.40: 11); three flakes and five tools: scraper on the blade (fig.40: 9), segmentoid scraper on the flake (fig.40: 13), borer (fig.40: 12), fragment of point (fig.40: 14) and mesial part of blade with retouch are connected with this stratum. Probably, bifacial points and their fragments are related to this layer (fig.40: 15-18). An copper(?) awl with tetrahedral section was found in the third layer, too (fig.40: 19).

According to the site planigraphy, the Eneolithic pottery is divided into two groups. The majority of it was found in southern and south-west parts of the settlement (fig.39, fig.40: 1, 3, 6-8). It is similar to the ceramics of the third layer of Strilcha Skelya.

The second group concentrated near the river bank and included the fragments of vessel without ornamentation, but with hatching on outer surface (fig.40: 5). Two sherds were ornamented with comb imprints, including “stepping” stamp (fig.40: 2, 4). Earlier those fragments were related to pottery of the Early Azov-Dnieper culture (Kotova, Tuboltzev 1996). But new investigations of the Neolithic and Eneolithic ceramics have shown, that they are typical to ceramics of the Middle Eneolithic Dereivka culture.

Radiocarbon dates were made for animal bones from the Eneolithic layer: 5525±70 BP (Ki-7673), 5655±60 BP (Ki-7674). These dates show, that the Sredniy Stog sites existed there about 4560-4400 BC.

2.3. SEVERSKIY DONETS BASIN

ALEXANDRIA

This complex monument, including multilayer settlement and cemeteries, is situated near village Alexandria in Kupjansk district of Kharkov oblast. It is located on the sandy terrace of left bank of the Oskol (fig.41: 1). The height of cape above surrounding flood-lands is about 4-5 meters. D.Y.Telegin excavated 1200 square meters in 1955-1957 (Телегин 1959).

D.Y.Telegin distinguished four cultural layers at that settlement: the Neolithic, the Early and Late Eneolithic, the Middle Bronze Age (Телегін 1973,

c.15). Study of the collections and field reports has shown the following stratigraphy (fig.41: 2; Котова 2003):

1. Sand with soil from trenches of the second world war.

2. Black humus sand with materials of the Middle Bronze Age (about 20 cm).

3. Gray-brown sand without archeological finds (about 20 cm).

4. Coal-black sand (about 35 cm). The materials of the Repinskaja culture of the Early Bronze Age were found in its upper part. The Neolithic and Eneolithic materials, which have been divided only typologically, were located in the lower part of that sand.

5. Gray-ash sand (about 80 cm). There were separate finds of flint and ceramic fragments.

6. Light yellow sand began at the depth of 1,85 m.

The Eneolithic pottery of that settlement was made of clay with shell admixture and could be distinguished into two groups (Котова 2003). The first group consists of 20 pots, which are typical to ceramics of the Dereivka culture of the Middle Eneolithic. It was located in the northern part of cape, which was the furthest from the flood-lands.

The second ceramic group includes six pots (fig.42, fig.43: 2). It was found in the eastern part of site on the cap edge. Pottery has, mainly, outturned short neck and rounded body. Necks are straight (fig.42: 1, 3, fig.43: 2) or with a groove inside the vessels (fig.42: 2, 4, 5). Pots practically always have necks, which are uniform across the width. The rims of three vessels are straight (fig.42: 4, 5, fig.43: 2). One pot has an oval rim (fig.42: 3), while another - oblique outward one (fig.42: 1). A rim of another pot is oblique inward (fig.42: 2). Only two vessels have rims with outside (fig.42: 2) or inside ledge (fig.43: 2), which changed their original form.

All vessels were ornamented with strokes (fig.42: 3, fig.43: 2), lines (fig.42: 4) and their combinations (fig.42: 1, 2).

This ceramic group of Alexandria is similar to the third layer of Strilcha Skelja, which pottery has the same short necks, as well as the linear, strokes and linear-strokes ornamentation.

SEREBRJANSKOE

Multilayer settlement was situated on sandy cape between Chernikovo and Kleshna lakes on distance of 3,5 km from village Serebrjanka in Kremenskoy district of Lugansk oblast (fig.44: 1). It was investigated by S.N.Sanzharov in 1997 (Санжаров, Бритюк, Котова, Черных 2000). The height of cape above the flood-lands is 0,5-0,8 m. Total area of site is about 2500 square meters. 1064 square meters were excavated and materials of the Bronze Age, Eneolithic and Neolithic were found.

The following stratigraphy was traced:

1. Turf (10-20 cm).

2. Black clay sand (50 cm).

3. Gray clay sand (20-30 cm). The Eneolithic materials of the Sredniy Stog and Dereivka cultures were found together with the Neolithic finds and they distinguished only typologically.

4. Light sand.

One vessel of the Sredniy Stog culture is similar to the pottery of the third layer of Strilcha Skelja. It was made of clay with shell admixture. This vessel had a point bottom, body with maximum diameter in the upper third and

grooved neck (fig.44: 2). Ornamentation included lines on shoulder, which were framed with oval strokes.

CHERNIKOVO OZERO 1

Multilayer settlement was investigated by S.N.Sanzharov in 1996 (Санжаров, Бритюк, Котова, Черных 2000). It was situated on the sand dune in 80 m to the north from lake Chernikovo in flood-lands of left bank of the Severskiy Donets. Height of dune above flood-lands is about 3 m. Total area of site is near 1500 square meters.

The following stratigraphy was traced:

1. Turf (25 cm).

2. Black clay sand (50 cm).

3. Gray clay sand (20-30 cm). The Eneolithic materials of the Sredniy Stog and Dereivka cultures were found in that layer and, partially, in black clay sand. They were equally distributed in central and eastern parts of excavation trench.

4. Light sand.

Three Sredniy Stog vessels with shell admixture are similar to ceramics of the third layer of Strilcha Skelja. They have short necks and point bottoms. One of them is ornamented with lines and oval strokes (fig.45: 2).

Another pot is decorated with short comb imprints (fig.43: 1). The third vessel has rim ornamented with imprints of short comb stamp (fig.45: 1).

CONCLUSIONS

Study of the settlements of the Early Eneolithic in Pontic steppe has shown, that they can be divided into two large groups. Specific features of these groups are represented with ceramics. The first group includes materials, which are similar to the third layer of Strilcha Skelja: the upper layer of Semenovka, Razdolnoe, Alexandria, the fourth and fifth layers of Razdorskoe 1, etc. Its ceramics was ornamented with lines, strokes and combinations of these elements. Rare comb imprints was used.

The second group involves the settlements with materials, which are typical to the second layer of Sredniy Stog: Kodachek, the fourth layer of Strilcha Skelja, Zolotaja Balka, Khortitsa. Its pottery was decorated, mainly, with comb imprints. A few pots had linear and stroke ornamentation. Stratigraphy of settlement Strilcha Skelja allows me to make a chronological correlation of both groups, which indicates younger age of the second group of sites.

Cultural layers of the steppe settlements with materials, which are similar to finds from the third stratum of Strilcha Skelja, occupied clear stratigraphical position. On Strilcha Skelja the third stratum overlapped the layer of the second period of Azov-Dnieper culture and was under the stratum with the materials identical to the Sredniy Stog site. At the Semenovka 1 and Kamennaya Mogila 1 settlements the materials of that type were found above the stratums of the Surskaja culture. On Kamennaya Mogila 1 they were overlapped by the materials, which are similar to Dereivka.

The layer with materials, which are similar to finds from the third stratum of Strilcha Skelja, laid above the stratum of Late Lower Don Neolithic culture and stretched under the Konstantinovka culture on Razdorskoe 1. Materials of that type overlapped layer of the Late Lower Don and Late Surskaja cultures on one part of the Razdolnoe settlement, while on the other part they

were found above the layer with materials of the second period of Azov-Dnieper culture. There were materials of the Middle Eneolithic above them.

Thus, available stratigraphical data shows, that settlements of the third layer of Strilcha Skelya type in steppe Dnieper and Molochnaja basins occupy chronological position between monuments of the second period of Azov-Dnieper culture and settlements of the Sredniy Stog type. They also preceded the sites of the Dereivka culture. The settlements of that type existed in Kalmius-Don interfluve later than the second period of Lower Don and later Surskaja culture, but earlier than the Konstantinovka culture.

Small group is formed by the settlements, which are similar to the second layer of Sredniy Stog. Excepting the eponimic site, it includes Kodachek,

Now they are known only in steppe Dnieper basin. Their stratigraphical positions are determined on two sites. On the Sredniy Stog settlement that layer covered materials of the second period of Azov-Dnieper culture and, in its turn, was overlapped by the Bronze Age materials. On Strilcha Skelja the materials, which are similar to the second stratum of Sredniy Stog, were found under the third layer and were overlapped by the layer of Yamnaja culture.

Study of materials of the Sredniy Stog type and their correlation with materials of the Strilcha Skelja type has shown, that they are genetically related. Their common features in ceramics are: point bottom, neck with the groove inside the vessel, sharp transition from neck to shoulder, lines and strokes ornamentation (fig.5: 1-3), decoration of rim (Table №9). There is some similarity in flint complexes, too. Tools were made of high-quality flint, which had, probably, common Donetsk origins. Objects on medium and large flint blades are predominant. There are many scrapers, among which end and end-side scrapers represent the most expressive series. Bifacial points of triangular form with straight or slightly concaved base are also the same.

All these facts allow me to suggest, that materials of monuments of the third layer of Strilcha Skelja type and the second layer of Sredniy Stog represent two successive stages of development of one culture. Its population lived in the Black Sea steppe during the Early Eneolithic. In this connection, the use of well-known term “Sredniy Stog culture” for this circle of settlements is the best valid, while there are no good reason to accept the name “Skeljanskaja culture”, proposed by Y.Y.Rassamakin.

CHAPTER 3. EARLY ENEOLITHIC BURIALS

Nowadays we can relate burials of the Novodanilovka type and some burials of the Igren cemetery to the Early Eneolithic with confidence.

3.1. BURIALS OF THE DNIEPER BASIN, AZOV SEA AREA AND SEVERSKIY DONETS BASIN

ALEXSANDROVSK CEMETERY

The monument was situated on the first terrace of left bank of the Luganka near Alexandrovsk in Lugansk oblast (Братченко, Константинеску 1987, с.17-31). The majority of Eneolithic burials were located on small hills of terrace, which were overlapped with kurgans during the Bronze Age. S.N.Bratchenko and L.F.Konstantinesku related 29 burials to the Eneolithic. But, only burials with inventory we can consider as the Eneolithic surely. Gender and age of skeletons were determined by K.Shepel (Шепель 1985).

Kurgan 1, burial 9.

It was found on the depth of 1 m from ancient surface (fig.46: 1) in a pit with inclined walls and uneven bottom (1,9 x 1 m). Skeleton of man of 30-40 years was flexed on the back with head oriented to the north-east (98 degrees). Taking into account seasonal deviations of sun I should conclude, that the skeleton was oriented to the east. Here and later for defining of orientation I use the method of V.V.Gening and V.F.Gening (Генинг, Генинг 1985).

Skeleton and pit bottom were painted with ochre. Burial was accompanied with numerous grave goods. There was a pendant from *Dentalium* shell under right knee (fig.46: 4), a bone pendant to the right under the chest in pit infill (fig.46: 3) and fourteen flint blades among bones (fig.46: 2, 5-13, 15-18). Flint point was found to the right from lower part of chest (fig.46: 14). There were two large blades with some retouch and fragments of medium blades without a retouch in the burial. One large blade was found to the right on belt near ulna and hand (fig.46: 17). The second blade with a length of 19 cm lay near the left shoulder (fig.46: 18). One medium blade was lay to the right from scull, two – beyond scull, one – near left knee. Two blades were also found on chest to the left, one – on chest to the right and one, perhaps, on some distance to the left from humeral bone.

Kurgan 1 burial 46.

It was found on the depth of 1 m from ancient horizon in oval pit (1,6 x 0,9 m). Skeleton of man of 30-35 years lay flexed on the back with head to the east (fig.47: 1). Bones of slightly curved arms were stretched along his body, while hands lay on knees.

Burial was accompanied with numerous grave goods. There were five horn objects on ribs near humeral bone and elbow of the right arm and flint blade above the right shoulder. Two pebbles with traces of use were found above the left shoulder and were used, perhaps, as fabricator, while horn artifact lay near them (fig.48: 15, 16). There was a horn clasp, as well as flint blades, between body and left ulna (fig.47: 7). Unfortunately, disposition of concrete horn objects (with the exception of “clasp”) and blades was not mentioned in field report, as well as in publication.

Flint blades were found in the pit infill. Authors of excavation wrote about 20 blades in burial. But, study of collection has shown, that elongated fragments of double side scraper on flake (fig.48: 6), which was broken during excavations, were described as five blades.

As a whole, flint inventory of burial includes two end scrapers on large and medium blades (fig.48: 1, 2), scraper on flake, fragment of tool on blade

(fig.48: 7), three fragmented microblades, one of which had traces of using (fig.48: 9, 17, 18), eight intact and fragmented blades (fig.48: 3-5, 10-14) and flint fragment with traces of using (fig.48: 8). Traces of using were also fixed on intact medium blade and fragmented medium blade (fig.47: 3, 13).

The radiocarbon date (5910±80 BP; Ki-12268) for human bone from this burial determines its age about 4850-4700 BC.

Kurgan 1 burial 55.

It was destroyed. Bones were painted with ochre.

Among the numerous grave goods (fig.50: 7-20) are beads from copper blade and shells, medium flint blade without retouch, small fragments of vessels with shell admixture in clay and comb ornamentation (unfortunately, it was published as a vessel with cord ornamentation).

Kurgan 10 burial 10.

It was found into sub-soil at a depth of 3 m (fig.49: 1). Flexed skeleton of child lay in oval pit (0,8 x 0,4 m) with head to the east. Bones and pit bottom were painted with ochre.

There was a copper pendant in the form of shell on scull and necklace from five (?) such pendants near jaw (fig.49: 2, 4-8). There was a chisel ornament on three pendants. Bracelet from copper wire was found on right humeral bone (fig. 49: 3).

There was a medium blade with a length of 14,5 cm on the right shoulder and to the right from scull (fig. 49: 10).

Large blade with a length of 13 cm was laid from knees to right shoulder (fig. 49: 9) and another large blade with a length of 18 cm was found on chest and along the scull (fig. 49: 11).

There also was a part of *Unio* in pit infill.

Kurgan 10, burial 17.

It was found at a depth of 0,8 m from ancient surface (fig.50: 4). Flexed skeleton of child lay on the back with head to the east and arms elongated along body.

There was a fragment of medium flint blade without a retouch on ribs to the right, while burnt flint flake and small pebble were found on the belt to the right (fig.50: 3, 5, 6).

BESSERGENOVKA CEMETERY

Group of ground burials has been found near village Bessergenovska in Oktjabr district of Rostov oblast in 1988 by I.N.Parysimov (Нечитайло 2004). They were located on terrace cape of right bank of the Don. Two burials were related to the Eneolithic.

Burial 3 was found in the quadrangular pit (1,1 x 0,7 cm) with a depth of 1,2 m (fig.55: 4). Flexed skeleton was laid on the back with head to the east (taking into account seasonal deviation of sun - about 51 degrees). Bones of left arm lay along body; right arm was slightly curved, while hand was on pelvis. Legs were leant against the wall, while facial side of scull was dropped on the chest.

Pit bottom was painted with ochre and there was also an ochre spot near left elbow of skeleton. Pit walls were burnt. Layer of burnt soil with calcined nubbins was also fixed in pit infill.

Burial 4 was situated in 50 cm to the north-east from burial 3 and was found in quadrangular pit (fig.55: 5). Flexed skeleton lay on the back with arms stretched along body and hands on pelvis. Legs were leant against the wall,

while scull was turned to the west by facial side. Burial was oriented to the east (near 51 degrees), taking into account seasonal deviations of sun.

Pit bottom was painted with ochre and an ochre spot with a diameter of 30 cm was found in the left part of skeleton.

There were 15 shell beads with a diameter of 3-4 mm (fig.55: 7), burnt flake, fragment of medium blade (fig.55: 7) and fragment of large blade from gray flint (fig.55: 4) near skeleton feet in the southern-western part of pit, which was filled with black earth and calcined ground.

VINOGRADNOE, kurgan 3, burial 15

Kurgan was located near village Vinogradnoe in Tokmak district of Zaporozhje oblast (Рассамакин 1987, c.36-37). Burial 15 was a central burial under the most ancient mound, which height was near 1 m and diameter - 12 x 14 m. There were remains of rather shallow ditch around the mound.

Fragments of brown vessel with shell admixture were found on ancient surface to the west from the pit. Their outer surface was smooth, while inner surface had traces of hatching.

Burial pit had an oval form (1,8 x 1,1 m) and converged to the bottom (fig.50: 1). There were fragment of horn and flint flake in its infill.

Skeleton of adult was found in semisitting position, oriented to the east. Arms were slightly curved in elbows and stretched to the sides, while knees were bended. Bones were intensively painted with ochre.

A fragment of large flint blade with a retouch, which length was 7 cm and width - 2,7 cm, was found on the chest (fig.50: 2).

DONESTK

Local citizen found a human scull and flint objects in 1960 during digging of household pit on the territory of city. Burial was investigated by A.K.Tahtai (Шаповалов 1960). It was located at a depth of 1 m. Pit bottom was painted with red ochre.

Skeleton lay on the back with head to the east and bended legs, which stood with knees upwards. A hand of right bended arm lay on pelvis, while left arm was stretched along body.

There was a flint retouched blade with a length of 17,5 cm in the right hand of skeleton.

Three bifacial points of triangular form with flat base and flint polished axe were found near scull (Телегин, Нечитайло, Потехина, Панченко 2001, рис.47: 5-9).

THE IGREN CEMETERY

The Igren Eneolithic cemetery is a part of complex monument – Igren 8, which consists of multilayer settlement and some cemeteries from the Neolithic to Middle Ages. It is located on the first terrace of the left bank of the Samara to the west from village Staraja Igren. Now it is the territory of Dnepropetrovsk (fig.51: 1). The terrace consists from loamy sand and its height above the Dnieper level is about 7-8 m.

The Igren cemetery was excavated in the beginning of 1930s (Миллер 1935, c.162-178) and in 1945-1946 (Добровольський 1949). Expedition of the Institute of Archaeology of Ukrainian Academy of Sciences continued its study in 1974-1978 and 1986. Monument is constantly washed out. In the intervals between excavations archaeologists regularly inspected it, finding broken skeletons and funeral inventory.

Chronology and periodization of the Eneolithic cemetery were analyzed in a special article (Котова 2005). As the Early Eneolithic I have attributed burials 3, 5, 8, 10, 15, 16, 17, burial 1 from excavations of 1930s, burial 11 from excavations of A.V.Dobrovolskiy and burial 2 from excavations in 1986. Some vessels from the territory of the Eneolithic cemetery (fig.52: 3) were also published (Добровольский 1949, рис.5; Даниленко 1974, рис.44: 2, 6), but information about them is absent in field reports.

Burial 3 was found at the depth of 0,9-1 m (fig.52: 4). Two skeletons painted with ochre lay flexed on the back with eastern orientation (for about 58 degrees), taking into account seasonal deviations of sun. The first skeleton belongs to man aged 30-35 and the second - to woman. Man's arms were stretched along body, while left arm of woman lay along her body and right hand was found on pelvis.

There were three large flint blades with a retouch between the skeletons on neck-bone level (fig.52: 5-7).

Burial 5 was found at the depth of 0,85 m. Skeletons of man aged 35-40 years and child lay flexed on the back with heads to the east (fig.52: 1). The adult was buried in sitting position and only then fell on back (Телегина, Филенко 1982, p.85). Both the skeletons were painted with ochre.

There were 20 small beads from sawed cortical bone near child's scull (fig.52: 2).

Burial 8 was found at the depth of 0,6 m in oval pit (fig.53: 8). Skeleton of adult lay flexed on the back with arms extended along body and with western orientation (314 degrees), taking into account seasonal deviations of sun.

There was a medium flint blade with a retouch under right hand near pelvis (fig.53: 7).

Burial 10 was found at the depth of 0,7 m. Skeleton of adult was flexed on the back with head to the north-east (58 degrees). It should be noted, that a pointer of north direction in field report and publication had different orientation. In this book, I have used a variant of field report. Taking into account seasonal deviation of sun, the deceased was oriented to the east.

His left arm extended along body, while hand was bent at right angles to body (fig.53: 1). Right arm was slightly bent and painted with ochre.

There was a large flint blade with a retouch from the left side near belt (fig.53: 6). Bracelet from seven (?) bone beads was found on left wrist (fig.53: 2-5).

Burial 15 was found at the depth of 0,95 m in the pit, which form was similar to square (1,14 x 1,05 m). The skeleton of child painted with ochre was badly preserved. Teeth were found in north-eastern corner of pit, while remains of legs – in south-western. Perhaps, skeleton was oriented to the north (about 20 degrees), taking into account seasonal deviations of sun.

There was a small vessel with point bottom and shell admixture in clay at the bottom of pit. Its rim has not preserved, while its surface was decorated with imprints of interweaved cord (fig.52: 9). This vessel is similar to the beaker from Semenovka and ceramics of Sredniy Stog (fig.121: 9-11).

A radiocarbon date (5745±60 BP; Ki-8304) for human tooth, determines its age about 4670-4520 BC.

Burial 16 was found at the depth of 0,95 м. Skeleton of adult lay flexed on the back with arms bent in the elbows (fig.54: 5). The deceased was oriented to the north with a small deviation to the east. There were traces of ochre at the bottom of pit, especially near chest.

There was a large flint blade with a retouch near waist (fig.54: 6).

Burial 17 was found at the depth of 0,6 m. Skeleton lay flexed on the back with head to the north, while his arms were extended along body (fig.54: 1). There were no scull, pelvis and right arm.

There were two bifacial flint points of triangular form with flat base near chest and right tibia (fig.54: 2, 3). A large flint blade with a retouch belongs to this burial, too (fig.54: 4).

Burial 1 excavated by M.A.Miller was found under some stones (Даниленко 1974, с.74). Skeleton of adult lay extended on the back with head to the north-east.

There was a small pot with shell admixture in clay. Its neck was broken off (fig.52: 8). This vessel is ornamented with imprints of interweaved cord. It is similar to the ceramics of Sredniy Stog (fig.121: 1, 7, 8).

Burial 11 was found by A.V.Dobrovolskiy at the depth of 1,3-1,4 m (Archive of A.V.Dobrovolskiy, №4, p.27). Skeleton lay flexed on the back and oriented to the east (fig.53: 9), taking into account seasonal deviations of sun. There were no scull, right ribs and right leg. Painted ground was cleared on the place of scull.

There was a medium blade with a retouch to the right on pelvis (fig.53: 11).

Fragment of medium flint blade with a retouch was found near right humeral bone (fig.53: 10).

Burial 2 was excavated by D.Y.Telegin in 1986 (Телегин, Нечитайло, Потехина, Панченко 2001, с.67). Grave form was close to triangular and it had ochre infill (fig.55: 1). Skeleton of old man lay flexed on the back and oriented to the east (60 degrees), taking into account seasonal deviations of sun. The right arm was extended along body, the left arm was slightly bent and its hand was on thighbone. Hands, pelvis and scull were intensively painted.

There was a retouched blade near right arm and not far from thigh-bone, while another blade with a retouch was found in molehill under bones (fig.55: 2, 3).

Skeleton was overlapped by the Late Eneolithic burial.

KARATAEVO CEMETERY

It was located on the outskirts of Rostov-on-Don (Кияшко 1994). There was a skeleton under some stones, that lay flexed on the back and lopsided to the left with feet also turned to the left. Arms were extended along the body. Burial was oriented to the north-east.

A medium flint blade with a retouch was found between right arm and thigh-bone (fig.56: 3). There were many circular and cylindrical bone beads, as well as beads, which imitated deer teeth.

KOISUG, group II, kurgan 5

The kurgan was investigated in 1968 by V.E.Maximenko near village Koisug in Azov district of Rostov oblast. It was situated on the upper terrace of left bank of the Don near one branch of its delta – the Koisug. Unfortunately, its materials were not published completely (Rassamakin 2004). According to its data, we can relate burials 27 and 33 to the Early Eneolithic. They were the most ancient in kurgan and situated on distance of 1,6 m from each other.

Burial 27 was made in the pit, which form was similar to triangle (2,13 x 1,22 m). Wooden logs from an overlap were traced. There also was a layer of cane and ochre on the bottom (fig.56: 13).

Skeleton of adult lay flexed on the back with head to the east, taking into account seasonal deviation of sun (63 degrees). Arms were bended in elbows, while hands lay on the pelvis.

There was a piece of brown ochre to the left from scull and piece of red ochre to the right.

Burial 33 was made in an alcove. There was an entrance pit of oval form (1,5 x 0,7 m), while alcove was situated along north-western wall with a sloping step. An entrance to the alcove was closed with the cane. The alcove had rectangular shape with rounded corners (1,7 x 0,8 m).

The skeleton of adult lay flexed on the back with head to the west (307 degrees), taking into account seasonal deviations of sun. The arms extended along body while the left hand was lay on the pelvis.

There was a medium flint blade near the chest of skeleton.

KRASNOGOROVKA, kurgan 5, burials 8 and 17

The kurgan 5 of the group III was excavated in 1987 by I.N.Parysimov on the outskirts of Azov on spur of watershed, which was framed in gullies (Нечитайло 2004). The kurgan was 30 cm in height and had a diameter near 28 m after ploughing. The burials 8 and 17 were placed near each other (about 1 m) and were parallel. They, probably, were the primary burials in the kurgan.

Burial 8 belonged to a man, whose skeleton lay flexed on the back with head to the east (fig.57: 1). His arms were slightly banded, while his hands were on the sacrum. There was a brown layer under the skeleton and humus layer in a form of pillow with a thickness of 5-7 cm under scull. The pit bottom and skeleton were covered with dark-red ochre layer, which thickness was about 1 cm. Ochre had bright red near the chest.

There was a retouched blade of lightly brown flint between phalanges of right hand (fig.57: 2).

A fragment of push-plane on massive dark-gray flake was found near the left elbow (fig.57: 3). Its working edges had breaks from use and large retouch.

Burial 17 was made in rectangular pit (1,4 x 0,7 m). There were traces of woods overlap in infill.

Skeleton lay flexed on the back with head to the east. The right arm was extended along body, while the left arm was bended in an elbow with hand on sacrum.

There was brown organic layer and chalk on the bottom of grave. Humus layer with a thickness of 5 cm in form of pillar was traced under scull.

Triangular point with slightly concaved base and pressure retouch was found near the chest (fig.57: 4). It was made on gray flint and its end was broken in ancient times.

Fragment of blade from lightly brown flint with a length of 7,5 cm and width of 2 cm was found in burrow hear right hand.

There were fragments of cortical bones of animals under the pelvis.

KRIVOY ROG

A cemetery on the high right bank of the Saksagan was investigated in Krivoy Rog in 1992 (Рассамакін, Будников 1993). Some burials were destroyed. I.D.Potehina studied anthropological material and published preliminary results (Рассамакін, Будников 1993).

Burial 1 was found in the oval pit (2 x 1,5 м). Its walls converged to the bottom and had ledge with a width of 6-10 cm at the depth of 2,25 m (fig.59: 1).

Pit narrowed to 1,4 x 0,9 m below. Calcined bones were discovered in the upper part of pit, while fragment of scull and animal horn were located at the depth of 45 cm. Pit bottom at the depth of 2,51 m was rough with a hollow in center. Bottom and skeleton were painted with ochre. There was an area with coal near western wall.

Skeleton of woman of 16-18 years lay flexed on the back with head to the east, taking into account seasonal deviation of sun (about 55 degrees). Right arm was extended along the body with hand bent to pelvis, while left arm was bended in an elbow with hand near pelvis.

Pendants from copper wire, stranded in 2,5 turns, were found to the left and to the right from scull (fig.59: 8, 9). Their diameter was 2,5 cm, ends were sharpened.

Six rows of copper beads – three long and three short – were found on the chest (fig.59: 2, 3). Near 1400 bead with a diameter of 6 mm were made of copper strips.

There was a row of nacreous beads (*Unio*) near the pelvis. They have circular and oval form and diameter of 16-12 mm (fig.59: 4, 5).

20 seashells with holes were lay without any system near the belt (fig.59: 7).

There was a copper awl with a bone handle near the right hand (fig.59: 6). It was made of copper rode. Section of working part was tetrahedral, while section of the handle part was circular. Handle was made of the bone of sheep or goat with a crack and small chip on the surface.

Piece of bright red ochre with a diameter of 13 cm and height of 9 cm was found near the left foot.

Burial 2 was situated near burial 1 and preceding to it. Its pit bottom was deeper on 27 cm and the depth from the surface was 2,78 m. It was made in an oval pit (156 x 82 cm) and had the same entrance pit with the burial 1. Brown layer (bark?) was traced in the north-western and eastern parts of pit, while bottom was painted with ochre. It also had a hollow near the center.

Skeleton of man of 40-50 years lay flexed on the back with a head to the east, taking into account seasonal deviation of sun (about 62 degrees). Arms were slightly bended, while hands were disposed on the pelvis (fig.60: 1).

There also were coals near the right elbow.

Pendants were found under the scull (fig.60: 7, 8). The left pendant had a diameter of 4 cm and diameter of right pendant was 3 cm. They were made of a copper wire in a shape of spiral with 1,5 turns. The ends of pendants were sharpened.

There were six rows of copper beads (about 900 pieces). They were made of narrow copper strips, which were turned into circles with diameter of 6 mm and width of 2-3 mm (fig.60: 9).

A gold tubule made of thin blade was found under the lower jaw (fig.60: 2). Diameters of its edges are 7 and 9 mm, while a length is 52 mm.

There was a microblade with a broken distant end under the chest (fig.60: 12). Its length is 24 mm and width – 7 mm.

There was a copper bracelet from a strip with sharpened edges, which was stranded in 1,5 turns on the right arm (fig.60: 3). Diameter of bracelet is 8,5 x 7,6 cm. The strip width is 1,6 cm.

There were two flint spear-heads near the left hand on the pelvis. The third point was under the pelvis. They had a triangular form with slightly bulging, concaved and flat bases (fig.60: 5, 6, 11).

A fragment of copper tetrahedral rod with a length of 48 mm and thickness of 7 mm, as well as quadrangular piece of copper (7 x 10 mm) were found to the left from the pelvis (fig.60: 4, 10).

Burial 3 was made in the oval pit. Its walls slightly converged to the bottom, creating small ledges with a width of 8-10 cm. Below the pit had a form of irregular oval (68 x 48 cm). There was some stones in its infill at the depth of 1,05 m. Animal bones were discovered among stones. The pit depth from the surface was 2,01 m.

Dead man was buried in the sitting position (fig.58: 2). His arms lay on the stomach, while legs were bended. All bones, excluding scull, were found in a layer of ochre with a thickness of 22 mm.

There was a flint blade with a retouch under the right hand (fig.58: 3). Its length is 7,5 cm and width – 2,3 cm.

A radiocarbon date for human bone was made - 6105±50 BP (Ki-8177).

Burial 4 was practically destroyed in result of construction works. Only feet of the skeleton were preserved. This burial was found in the ground, which was painted with ochre, at the depth of 2,17 m from surface.

Analyses of metal have allowed to synchronize this cemetery with Tripolye A and B I (Рындина 1998).

KUT, kurgan 8, burial 1 and 7

The kurgan near village Kut in Apostolovo district of Dnepropetrovsk oblast was investigated by D.T.Berezovets in 1951 (Телегин, Нечитайло, Потехина, Панченко 2001). It was situated on the cape of right bank of the Dnieper, which is washed by rivers Basavluk and Pidpilna.

Burial 1 was found in the north-eastern sector of kurgan on the level of ancient horizon. It included two crushed sculls and fragments of ribs, among which circular nacreous beads were discovered.

Burial 7 was found in 2 m from burial 1. Contours of pit were not traced, but its infill was painted with ochre.

Skeleton lay flexed on the back with head to the east (fig.61: 3). The hand of slightly bended left arm was near the pelvis. The left arm was destroyed by the younger burial.

Flint blade (a length – 23,5 cm) with a retouch was found on lumbar vertebras (fig.61: 4).

LIVENTSOVKA 1 CEMETERY

It was investigated by S.N.Bratchenko in 1963-1964 in the western outskirt of village Liventsovka (Братченко, Шарафутдинова 2000). Nowadays it is the territory of Rostov-on-Don. The cemetery was situated on the cape of the second terrace of Mertvy Donets river and included burials of different epochs.

Burial 4 was made in rectangular pit (1,7 x 0,7 m). Its depth was 0,7 m (fig.57: 6). Western part of grave was overlapped with the sandstone plate, while in the eastern part stone was destroyed. There were some standing stones, which formed a fence around the grave, which was disturbed by the younger burials. A layer of ochre with a thickness of 15-20 cm was found on the pit bottom.

Skeleton of adult lay flexed on the back with head to the east.

An adornment from a boar fang with two holes on the ends and a loop in the middle was lay across the neck with a loop downwards (fig.57:7).

LUGANSK (VOROSHILOVGRAD), kurgan 1, burial 2

The kurgan on the territory of Agricultural Institute was investigated in 1973 (Писларий, Кротова, Клочко 1976, с.21-28). Its height was 0,55 m and diameter - about 25 m.

Burial 2 was found in a pit with complicated contours (2,7 x 2,35 m) at the depth of 0,92 m from surface. Along its walls, with the exception of the western, marl plates were stood. Infill consisted of soil with ochre. North-western part of grave was partially disrupted by a burial of the Yamnaja culture.

Burial 2 included three skeletons flexed on the backs with heads to the east (fig.62: 1). Their hands lay on the pelvises. The bottom of pit was painted with ochre under the sculls, chests, pelvises and foot.

Skeleton 1 belonged to a 40-45-year-old man (Потехина 1976, с.32-33). The pelvis and legs were broken by the Yamnaja culture burial.

There was a bone tubule to the right from the scull (fig.64: 7).

Large and medium flint blades were found under the scull (fig.62: 4, 5), one medium blade with a lamellar retouch – on the chest (fig.62: 20, a large blade – near the right elbow (fig.62: 3).

A horn blade with distinguished head and hole lay near the left shoulder (fig.64: 3).

Skeleton 2 (a man aged 45-50) was accompanied with numerous burial grave goods. There were eight flint blades to the left from the scull (fig.63: 1-7, fig.65: 2). Six of them were large, while two were medium.

There was a polished flint axe (lost), a large flint blade (fig.64: 3) and a medium blade with a lamellar retouch to the left from the scull (fig.63: 8).

An abrasive tile and a horn head were found between the right collar-bone and low jaw (fig.65: 1, fig.66: 1).

There also was a large flint blade near each hand of the skeleton (fig.64: 1, 2).

Two flint axes (fig.66: 3, 4), a flake with a retouch (fig.64: 6), a proximal end of blade (fig.64: 4) and two adzes, made of slate of local origins (fig.65: 3) and serpentine (fig.66: 2), were found under the thigh-bones. This finds compactly lay, and the authors of excavation suggested, that originally they were put in a bag. Remains of ferriferous substance were traced under them.

Skeleton 3 (a man aged 35-40) was accompanied with some astragaluses, which were found near his head, and a large flint blade in the right arm (fig.66: 5).

Flint tools from burial 2 were made of gray-brown (fig.62: 2, fig.63: 4, 5, 8, fig.64: 6, fig.65: 2, fig.66: 3, 4) and honeyed (fig.63: 1, 3, 6, fig.64: 1-3) flint of high quality, gray flint with the transparent spots of lower quality (fig.63: 2) and gray opaque flint (fig.62: 5, fig.63: 7).

Authors of publication related the burial to the Novodanilovka cultural group, dating it about 3500 bc.

MARIUPOL CEMETERY

It was investigated in 1930 by N.E.Makarenko on the terrace of left bank of the Kalmius near Mariupol in Donetsk oblast (Макаренко 1933). In addition to the big Neolithic cemetery, which included more, than 100 burials, some burials of the Early Eneolithic were investigated there (fig.67: 1).

Burial with the copper bracelets was found to the west from the southern edge of ochre stripe of the Neolithic cemetery and in 45 cm from burial XXI.

Remains of skeleton were located in chernozem at the depth of 40 cm from surface. The pit form was not fixed.

Some parts of scull and arms remained. The skeleton head directed towards the west.

There was one bracelet from copper wire on each arm of the skeleton (fig.62: 2, 5). The second bracelet was spiral in two turns.

Four copper beads from copper blade were found among the skeleton remains (fig.62: 3, 4).

Cremation was found in 45 cm to the south from the burial with bracelets. It was overlapped with group of stones (40 cm thickness), which had a form of crescent in the upper part and oval shape in the lower part. The stone sizes varied from 30 cm and lesser in diameter.

The cremation was discovered in the middle part of stone group, near and a little lower from the northern horn of stone crescent (fig.68: 1). A heap of ash mixed with the soil (65 cm in diameter and thickness up to 8 cm) included remains of burnt bones. According to the traces of fire on the stones, the cremation was made on the place of burial.

Burnt bifacial flint point in the form of triangle with a flat base and fragment of medium flint blade with a retouch were also found in that heap (fig.68: 7, 12).

There was a medium flint blade with a length of 3,8 cm to the east from that pile and out of its borders (fig.68: 13).

Fragments of four blades from boar fangs with transversal grooves on short sides were found near the ash heap (fig.68: 8-11). Two of them were decorated with short notches, which were also made on short sides of blades.

In addition to it, there was a black elongate stone with polished edges near the ash heap.

Burial XXI was situated to west from the Neolithic cemetery under oval group of stones. Local population has taken some stones for modern construction, but their imprints preserved on the ground.

Under the stone accumulation a pit with stone plates along the walls was found (fig.68: 2). There was one large plate in the eastern part of pit with smaller plates on the sides. The burial was cut with the ground. Now it is exhibiting in the Mariupol Historical Museum. Due to this fact a complete characteristic of its inventory is lack in N.E.Makarenko’s book. I am very grateful to the scientists of the Mariupol Historical Museum, R.I.Saenko and L.I.Kuchugura, for their help in the description of these grave goods.

Skeletons of two men (one was old, while other was about 30-35, Гохман 1966, с.166) lay flexed on the backs with heads to the east. Their hands were on the pelvises and heads were elevated.

There was a large flint blade with a retouch and lengths of 11,1 cm and width of 2,7 cm among the hand bones of right skeleton, which belonged to the man aged 30-35. It was made of lightly gray flint with dark spots (fig.68: 3).

A bone blade with a length of 15,7 cm was found above the right shoulder of old man (fig.68: 6). Its maximum width is 1,5 cm and thickness is 0,6 cm. There was a hole in the middle of slightly bulging part of one of the long sides.

A copper bead in a form of ring (fig.68: 4) and small flat bead from nacre (fig.68: 5), which disposition were not fixed, were connected with the burial XXI.

Two radiocarbon dates for bones of man aged 30-35 was made - 6320±70 BP (Ki-9478) and 6370±75 BP (Ki-9479), which show the average statistical date in 6345±65 (Ki-9480). It determines the age of burial about 5330 BC.

Burial xxIV bordered with the western side of the Neolithic cemetery. It destroyed the Neolithic grave XCVIII and was overlapped with the stone group (2 x 1,5 m). Stones with the size up to 45 cm formed one or two rows. Under the stones a pit with rough stone plates along walls was discovered.

The skeleton was found at a depth of 86 cm. It lay flexed on the back and head directed towards the east (fig.67: 10). Arms were extended along the body. Skeleton head and legs lay above the pelvis. The burial was abundantly painted with ochre. The largest amount of ochre was found near belt. There was a strip of ochre with a width up to 40 cm, which extended from the northern part of grave to the southern across skeleton.

A mace from the dark-green porphyry with a spots was found on the collar-bone near the head (fig.67: 20). Remains of decomposed handle were traced from mace to the belt.

There were two blades from boar fangs under the chin. They had transversal grooves on the short sides.

Five such blades were found near belt in the dense mass of ochre (fig.67: 11-18).

There were 15 teeth of marmot near the right part of pelvis.

Nacre beads lay in vertical short rows slightly above them (fig.67: 6, 7). They were made in the form of circles with cut segment.

A circular nacre bead (fig.67: 8) and two bone beads (fig.67: 19) were found in the same place.

There also was a copper bead from blade near them (fig.67: 9).

Judging from the drawings in E.N.Makarenko's book two, probably, bone beads were in the middle part of chest (fig.67: 10).

MOKRY CHALTYR, kurgan 2, burial 6

The kurgan was investigated in 1961 by V.M.Zhibura in 20 km to the west from Rostov-on-Don on the right bank of the Mokry Donets (Рассамакин 2004). There was a cromlech under mound, made of flat stones. Some of them were inclined, while others lay aflat. A passage was left in south-western part. Cromlech was disturbed by bulldozer in northern part and by a catacomb burial in eastern part. The cromlech surrounded the Eneolithic grave 6, which was partially destroyed by a catacomb burial 5. Pit of burial 6 partially cut through the pit of more ancient burial 4, which was overlapped with the cromlech.

Burial 6 was situated in the center of cromlech, while ground from the grave and a fragment of vessel (fig.69: 2) were found in south-eastern part of the cromlech at the depth of 75-77 cm from a permanent bench mark. The burial was partially destroyed by a burial of the Catacomb culture. A grave chamber and its entrance were overlapped with the stones on different levels. There were fish bones, shattered sheep bones, some of which were burnt and painted, among the stones in south-western part of pit at the depth of 1,63 m from the permanent bench mark.

The burial 6 was fixed from the same depth in subsoil. It was made in an oval pit (2,4–2,5 x 2,31 m). North-eastern edge of the pit was destroyed. There were hollows along north-western and south-eastern walls, divided with subsoil partition. Its depth was 1,87–1,89 m from the permanent bench mark, while a depth of hollows was 2,09 и 2,05 m. North-western hollow was surrounded with the vertical plates, one of which lay aflat. Above them a covering plate was placed.

The skeleton of adult lay flexed on the back and oriented to the east, taking into account seasonal deviation of sun (about 50 degrees). The scull was absent (fig.69: 1). The right arm was extended along the body, while the left one was slightly bended.

The skeleton was abundantly painted with ochre while a pit infill was also mixed with it.

There were a tool on a flint flake and a separate flake near dead (fig.69: 3, 4).

MOSKVA 1

Kurgan was investigated in 1997 by V.V.Potapov on the outskirts of Veselyi in Rostov oblast. It was situated on the high left flood-lands of the Manych (Жеребилов 1998; Нечитайло 2004). The kurgan was near 1 m high and its diameter was about 30-35 m. The kurgan was disturbed by a quarry before excavations.

Burial 6 was the primary burial, which was made in a quadrangular pit (1,85 x 1,15 m). Its south-western part was destroyed by the younger burials 7 and 8 (fig.69: 5).

A skeleton of man lay flexed on the back with a head to the east. The right arm was slightly bended.

Skeleton and the bottom of pit were painted with ochre. There was a layer of loamy soil (thickness is about 5 cm), which was mixed with ochre, under the skeleton.

There was a large blade from gray-brown flint with a length of 18 cm and width of 3 cm near his hand (fig.69: 6).

MUKHIN, kurgan 3, burial 6

The kurgan was excavated in 1995 by M.V.Vlaskin on the right high bank of the Don on the outskirts of Aksai in Rostov oblast (Власкин 2002). The burial was the primary in the kurgan. It situated in its center at the depth of 1,69 m. There was a cromlech from crude sandstones around the burial mound.

The man, older, than 35 years, lay in a pit (2 x 1,4 m), which form was similar to the rectangle. The skeleton was practically destroyed by rodents. Judging from preserved bones of skeleton, it lay flexed on the back with head to the east, taking into account seasonal deviation of sun (62 degrees).

A layer of red ochre with a thickness up to 1 cm was traced on the pit bottom near the skeleton. Some bones were also painted. The largest concentration of ochre was fixed near the right shoulder and feet.

A gray flint blade with a retouch was found in the central part of pit infill (fig.70: 2). It has a length of 13,7 cm and width of 2,1 cm.

MUKHIN 2, kurgan 5

The kurgan 5 was excavated by E.I.Bespaly on the outskirts of Aksai in Rostov oblast (Нечитайло, Козюменко, Жеребилов 1998). It was situated on the watershed of big gullies Klinova and Mukhina on the right high bank of the Don. A height of kurgan was 4 m, while a diameter was about 40 m. Burials 7, 9 and 30 were found in the south-western part of kurgan.

Burial 9 was found in 5,2 m from the kurgan center. It was made in catacomb (fig.70: 3). The square pit (1,45 x 1,5 m) with a depth of 0,6 m from the ancient horizon lowered from center to the chamber side and ended with the half-meter step. An entrance into the chamber was closed with the wooden poles and shell rock piles. The grave bottom lowered from western wall to eastern one

and its depth was about 1,21 m from the ancient horizon. A chamber length was 1,7-2 m, width - 1,4 m near western wall and 0,9 m near eastern one. A height of the chamber vault was 0,7 m. There was a plant bedding on the chamber bottom. A floor was powdered with chalk and ochre.

A skeleton of 17-20-year-old woman lay flexed on the back with head to the east with some deviation to the north. Arms were slightly bended with hands on the pelvis.

The skeleton was intensively painted with dark-red ochre. Lumps of ochre were found near the scull. Dark-red ochre was found to the left of it, while bright red ochre was to the right. An orange lump of ochre was found near the pelvis.

A fragment of microlithic blade from light brown flint with a length of 4 cm and width of 0,7 cm was found near the scull (fig.71: 9).

There also were two blades near the hands. The light brown blade with traces of using had a length of 16 m and a width of 3,5 cm (fig.71: 8). The transparent black blade from obsidian was retouched (fig.71: 7). Its length was 25 cm and width - 3,2 cm.

There was a copper awl with a square section near the lumbar vertebra (fig.71: 1). Its length was 2,5 cm and width - 0,2 cm.

Nacre beads with a diameter from 1,5 cm to 2,5 cm lay along the thigh-bones, on the caxal bones and under them (fig.71: 3-5).

Shoulders of cattle lay parallel to each other near the feet of the skeleton (fig.71: 10). Shoulders upper epiphysises were cut, while ribs and lower ends were polished. The authors of publication supposed, they could be used as musical instruments.

Fragments of a copper ring from a thin blade with a diameter of 1,2 cm (fig.71: 2), 10 copper beads from a blade with a diameter of 0,3 cm (fig.71: 6), piece of hematite (0,8 x 0,5 x 0,3 cm) and 3 dog phalanges were found under the lower part of chest in the infill of a rodent burrow.

There was a large blade section from a gray local flint with a patina in a pit infill (fig.71: 11).

Burial 30 was found in 3,3 m from burial 9. It was made in a catacomb (fig.72: 1). Its entrance pit had a form, which was similar to rectangle (1,35 x 1,55 m) and a depth of 0,66 cm from the ancient horizon. A bottom of the chamber was lower, than entrance bottom for 0,94 cm and came down with steps. The last of these steps, which was made as a ledge with a width of 0,25-0,4 m, encircled the chamber from three sides. The bottom of chamber slightly lowered for 0,45 cm to the east from the step. The chamber was a shape of trapezium (2 x 0,7 x 1,55 m). A vault and entrance collapsed in ancient times.

The skeleton of the man, older than 45 years, lay in eastern part of a chamber on wooden flooring, which form was similar to the rectangle (fig.72: 2). The skeleton was oriented to the east. Legs were strongly bended to the body and turned to the left. The left arm was slightly bended in an elbow, while its hand was in front of the face. The right arm was slightly bended with a hand on the belt.

There was a layer of ochre and chalk around the scull. Large numbers of ochre were powdered near knees and feet. A layer of chalk was also traced to the left from a skeleton.

There were remains of cane in the north-eastern corner of the ledges. The remains of cane and wooden blocks with a section up to 10 cm were found near the entrance.

There was a copper awl with a square section and a length of 2,6 cm in the entrance infill (fig.72: 3).

Burial 7 included three children skeletons before 9 years (fig.73: 1). They lay on a level of ancient horizon and their heads directed towards the west.

The northern skeleton lay on the right side with strongly bended legs. The right arm was bended, while the hand was in front of the face. Only humeral bone preserved from the left arm.

The scull of the middle skeleton lay on the right side, while the left leg was strongly bended.

The southern skeleton lay flexed on the back with legs bended to the left. The right arm was bended under the right angle with the hand on the pelvis. The left arm did not preserve.

There was a layer of dark red ochre under the skeletons.

Two vessels with point bottoms were found behind the back of northern burial (fig.73: 2, 4). They were made of clay with shell and bloodstone admixture. Their ornamentation consists of comb imprints.

There was a flint flake (2,6 x 1 cm) of gray local flint with a chalk rind under the scull of medium burial (fig.73: 3).

The authors of publication synchronized the burials 5 and 9 with the end of Tripolye A and B I. According to them, the pottery of burial 7 is comparable with the ceramics of lower layer of the Liventsovka 1 site and could be synchronized with Tripolye B II. They suggested, that those burials belonged to a cemetery located on an ancient hill, on which the kurgan was built in the Bronze Age. I can't agree with them, because the burial 7 was made on the level of ancient horizon, and therefore it had to be overlapped with the burial mound.

NIZHNY ROGACHIK

Burial 9 was found in 1951 by D.T.Berezovets on the Scythian settlement in 500 m from village Niznyi Rogachik in Verkhnyi Rogachik district of Kherson oblast. This monument was situated on the cape of the left bank of the Dnieper at the confluence of the Konka and the Dnieper (Телегин, Нечитайло, Потехина, Панченко 2001).

The burial was discovered at the depth of 1,2 m from the surface. Contours of pit were not fixed.

The skeleton lay flexed on the back with head to the east, taking into account seasonal deviation of sun (57 degrees)(fig.61: 1). Its arms were extended along the body.

The bones were painted with ochre. There were pieces of ochre to the left from the scull, near feet phalanges and to the right from the elbow.

A large flint blade with a retouch was found on the vertebras, slightly above the pelvis (fig.61: 2).

NOVODANILOVKA CEMETERY

It was found during construction in village Novodanilovka in Orekhov district of Zaporozhje oblast (Телегин, Нечитайло, Потехина, Панченко 2001). The cemetery was situated on the slope of high bank of swamp Osoka, which is the part of wide estuary in a valley of the left bank of the Konka. Two burials in separate pits were discovered at a depth of 1 m.

Burial 1. The skeleton lay flexed on the back with head to the east. It was intensively painted with ochre.

Burial 2. There was a sandstone plate with a length of more, than 1 m above it. A surface of plate, as well as a stone near it, was decorated with small hollows and cross lines.

The skeleton lay in flexed position and was painted with ochre.

It was accompanied with 15 long flint blades without retouch, more than 70 nacre beads, two copper bracelets from a circular wire and a vessel (fig.74).

PETRO-SVISTUNOVO CEMETERY

It was found and investigated by A.V.Bodjanskiy in 1962 in Krasnoarmeisk district of Zaporozhje oblast (Бодянський 1968, с.117-125). It was situated on the cape at the confluence of gully Kaistrova and the Dnieper on the second terrace, which was in 15 m above the river level. The cape became an island (0,6 х 0,5 km) after the Dnieper hydroelectric power station building. Wide and sloping part was flooded and remains of the Eneolithic cemetery were found in a wash-out of the bank. There also were kurgans and cromlechs on the island. Unfortunately, a field report about excavations was not delivered to an archive of the Institute of Archaeology in Kiev. A plan of the cemetery, as well as drawings of skeletons, was not published.

Burial 1 preserved partially and was found at the depth of 1,7 m in an oval pit (1,4 х 1,1 м). It was put into loess on 0,6 m.

The skeleton lay flexed on the back with head to the east and arms extended along the body. It was intensively painted with ochre.

There were green traces on the jaw and collar-bone from two rows of copper beads (120 pieces, fig.75: 5-8).

Three flint axes were found to the left from the scull (fig.75: 9-11), while a medium flint blade with a retouch was discovered above them (fig.75: 1).

There also was a piece of ochre near the left hand.

Probably, two bracelets and two beads, which were found near the arm remains, were connected with the burial. The beads were made of thin copper plate (fig.75: 3, 4). The bracelets in three turns with sharp edges were made of copper wire (fig.75: 2). Their diameters are 7,4 cm.

Burial 2 was found in 4 m from the burial 1. The skeleton lay flexed on the back with head to the east.

Its grave goods included four bifacial flint points of triangular form with flat or slightly bulging bases (fig.76: 1, 2), a fragment of medium flint blade with a retouch (fig.76: 3) and big shell beads from *Unio* (fig.76: 4).

An adornment from a boar fang with three holes was also found in the burial (fug.76: 5). Its lower surface was chopped off and polished. There were seven harrowed lines on the outer side of it.

108 artefacts were found in the wash-out of the river bank. Perhaps, they were connected with destroyed burials. These finds included flint bifacial axes with polished blade (fig.77), triangular bifacial flint points, flint blades and their fragments (fig.78: 1-8, fig. 79, fig.80). One tool was identified by A.V.Bodjanskiy as a bifacial flint dagger, but it could be a leaf-shaped point (fig.78: 9).

Three adornments were made of boar fangs. There were ledges with holes from the inner sides of two of them (fig.81: 6). The third adornment had some holes on the ends in addition to a ledge with a hole (fig.81: 50. A *Cardium* shell, painted with ochre, also was among the finds (fig.76: 6). There also were a fragment of alabaster adornment imitated a sea shell (fig.76: 7), an ornamented copper hammer in form of rhomb (fig.81: 4), bracelets from copper wire (fig.76: 8, 9) and scrap-copper (fig.81: 1-3).

Analyses of metal tools have allowed to synchronize this cemetery with Tripolye A-B I (Рындина 1998) and connected it with the Early Eneolithic.

POPOV KHUTOR, kurgan 31/7, burial 4

The kurgan was excavated in the beginning of 1950s by A.D.Stoljar (Столяр 1958, c.384-386) in the former Tzimlansk district of Rostov oblast on the right bank of the Don. A height of the burial mound was about 1 m, diameter – 42-46 m.

Burial 4 was made in north-western sector of the kurgan in a pit, which depth was 0,4 m from an ancient surface. The pit had the irregular oval form. Walls were damaged by rodents, and pit original size was lesser, than fixed. There was a rectangular spot (0,8 x 0,6 m) in northern part of the grave, which was painted with ochre (fig.81: 1). There were grooved imprints of mat, which was made, probably, from cane.

Thin coal layer (0,3 x 0,4 m) was traced in 3-5 cm below the spot, mainly, in its western part.

Only cortical bones, which were disturbed by rodents, preserved from the skeleton (fig.82: 2). They belonged to a child of 3-4 years. On A.D.Stoljar's opinion, the skeleton lay with head to the north.

The grave goods included a small vessel with shell admixture and linear ornament (fig.82: 12).

There were two fragments of medium blades from light yellow semi-transparent flint in 0,3 m to the south from the vessel and near humeral bone (fig.82: 10, 11).

The biggest medium blade was found to the south-east (fig.82: 9).

Four bone beads were discovered to the north-east from the first and the second blades. They lay in 5-8 cm from each other. The fifth and the biggest bead ornamented with notches lay nearer to the pot (fig.82: 8).

Remains of necklace with beads of the same shape were found among the bones. Some of them were made of *Unio* and solid shells, while others were made of gray semi-transparent solid material (fig.82: 3-6).

There was a malachite oxide of ruinous copper item in 7 cm from the vessel.

A flat triangular fragment of sandstone with traces of ochre on surface was found to the south-west from it (fig.82: 7).

TUZLUKI, kurgan 9

The kurgan was investigated in 1980 by E.B.Bespalov near khutor Tyzlyki in Bagaevskaja district of Rostov oblast on the left bank of Manych river (Нечитайло 2002; 2004). The burial mound was damaged by road and buildings. Preserved height was 0,62 m and a diameter - 24-28 m. 33 burials of different epochs were discovered in the kurgan. Flint artifacts were found on an ancient horizon as well as under the burial mound. Probably, burials 28 and 32, which were found on the distance of 70 cm from each other, were the oldest in the kurgan, and burial 27 and 31 were synchronous to them.

Burial 28 was made in a pit, which form was similar to an oval (1,77 x 1,05 m). A skeleton of child aged 10 lay flexed on the back with head to the north (fig.83: 1). The arms were bended, while the right hand was near the pelvis. The left hand and left leg were destroyed by the burial 30. The skeleton and pit bottom were powdered with the bright red ochre. There was a spot of the same ochre to the left from the scull.

Two rows of bone beads (35 pieces) were found on the preserved part of pelvis in the layer of ochre.

There also was a core in the pit infill (fig.83: 2).

Burial 32 was made in a pit, which form was similar to an oval (2,2 x 1,5 m). Corner of the pit was disturbed by the burial 30.

Scattered bones of the man aged 23-25 were found in the pit infill above the bottom. The scull was trepanned in the cervical part.

The bones and pit bottom were painted with ochre.

Burial 27 was made in a pit, which form was similar to the quadrangle with rounded corners (1,4 x 0,65 m).

The woman skeleton painted with ochre lay flexed on the back with head to the west (fig.83: 3). The arms were slightly bended, while the left hand lay on the sacrum.

Brown organic layer was traced under the skeleton.

There was a blade of light brown semi-transparent flint (length - 8,7 cm, width - 1,3 cm) with the traces of using on the left side of chest in the lower part of it (fig.83: 4).

There also was a fang of large predator under the right elbow.

Grinded off teeth of the large animal were found under the left arm.

The same teeth were found in the grave infill with the copper rod, which length was 0,9 cm and diameter - 0,3 cm. It was circular in section.

Burial 31 was situated in the central part of kurgan at the depth of 2,3 meters. It was made in the oval pit (1,9 x 1,4 m). Walls widened to a bottom of the pit. The southern part of pit was disturbed by an entrance shaft of a burial 24 of the Catacombnaja culture.

A skeleton was destroyed in the ancient times. The pit bottom was powdered with ochre.

Feet bones lay *in situ* in south-eastern corner.

There were fragments of a vessel with shell admixture in clay in south-western corner in pit infill (fig.83: 5). We should mention slanting notches made on its rim. Row of such notches was also made on the neck. There is a ribbon below, which was limited by the drawn lines and filled with double imprints. Arcs from drawn lines, which were framed in notches, dispersed from the ribbon down.

Fragments of two copper beads made of the strip (length is 1,2 cm, diameter – 0,4 cm, fig.83: 6) were found between two long bones.

CHAPLY CEMETERY

It was found by A.V.Bodjanskiy and investigated by A.V.Dobrovolskiy in 1950 on the Igren peninsula (Добровольський 1954). The cemetery was situated on the left bank of the Dnieper in the opposite of river Shijanka mouth. The height of bank above the old level of Dnieper was about 10 m. Fragments of the Bronze Age pottery were found on the territory of cemetery at a depth up to 0,9 m in humus soil. The cemetery included the Neolithic and Eneolithic parts. Stone groups above the Eneolithic burials were discovered at a depth of 0,9 m. As a whole, five Eneolithic burials were investigated (fig.84).

Burial 1a was overlapped with the stone group of oval form made of flat plates and small stones (1,9 x 1,4 m). It was oriented from north-east to south-west. There was humus sand under the stones. Upper edges of two inclined plates appeared at the depth of 1,05-1,1 m on the distance of 1,1 m from each other. Their length was 0,7 m, width – 0,4 m and thickness – 0,1 m. Stones of different size were found between them, especially near southern plate, which, perhaps, represented the remains of sunken covering. There was a small flat stone with

red ochre on surface (grindstone?) among them. Tooth of ovicaprids was also found in the infill (definition by I.G.Pidoplichko).

There was a sandy soil between inclined plates. A pit bottom was located at the depth of 1,4 m. There was a skeleton of child, which was painted with ochre and lay on the ochre layer. Only teeth preserved from the skeleton near northern part of pit.

There was a horn tool with a perforated hole to the left from the teeth (fig.85: 1), while a boar fang was found to the right. A necklace from 13 copper pendants in the form of shell with a hole was found on the chest (fig.85: 2, 3).

There was a belt near the pelvis. It included circular nacre beads (*Unio*) with a diameter about 1,5 cm (fig.85: 5).

There also were copper beads in a form of circle from wire, which was rectangular in section (fig.85: 4).

Large and medium flint blades were found on the belt (fig.85: 12, 13). Their points oriented in different sides.

Burial 2a was situated in 2,5 meters from the burial 1a. It was overlapped with a stone group, which consisted of stones and plates, at the depth of 0,9 cm. One inclined plate from north-eastern edge was deepened into ground. Under the stone group plates formed a tomb in a pit. Some stones were found in its north-eastern part. The pit infill consisted from humus sand painted with ochre. Judging from the borders of painted soil, the pit had an oval form (1 x 0,7 m) and depth about 1,4 m.

There were remains of skeleton of child at a bottom, which was painted with ochre. Remains of the scull were found in northern part.

There was a belt from nacre beads in the center of pit.

A large flint blade with a length of 13 cm and traces of using was found near the belt (fig.85: 14).

There also was a tooth of ovicaprids in the pit infill.

A radiocarbon date for skeleton bones (5840±90 BP Ki-11079) defined an age of the burial about 4679±114 BC.

Burial 3a was situated in 1,5 m from the burial 2a. A stone group was located at a depth of 0,9 m. Some stones and plates from a pit covering fell into the pit. There was a heap from 13 flint pebbles with the traces of chips, directional flat core (fig.86: 1) and directional core of unilateral chipping (fig.86: 3). All flint objects had gray-brown color and were transparent.

The stone group formed a bulging oval (1,5 x 1 m) at the depth of 1,1 m with a height in the center of 0,4 m. It was oriented from north to south. A cattle caxal bone lay on one stone. A tetrahedral stele (82 x 16 x 12 cm) was found in north-western part of stone group. One side of stele had natural smooth surface, while other were handled. There was an oval on the wide side and small ledge under it. An oval also was depicted in the opposite side.

Some oblong stones were found under the upper layer of stone group. A small stone with a flat surface and traces of ochre lay on one of them.

There was a sandy soil with a thickness up to 5 cm under the stones. It was painted with ochre and overlapped a skeleton, which lay on ochre layer. The scull, humeral bones and leg bones preserved. Judging from them, the skeleton lay on the back with head to the north. On the base of the painted infill of the pit we can suppose, that it had an oval shape (1,5 x 1 m) with a depth of 1,4 m.

The burial was accompanied with inventory. Two copper blades, which stood on their edges, were found on the crown of the head (fig.85: 10, 11). Smaller blade lay very close to the bigger. There were holes in both of them.

There were three rows of copper beads in the form of rings on the forehead (fig.85: 7). They were made of quadrangular wire.

Four rows of the same beads went down from the frontal bone on the facial part of scull, forming arc. Perhaps, they slipped from the forehead. Wire section was 1-2 mm, while diameter of beads was 3-4 mm.

Hand spoke bones were decorated with copper bracelets. There was the bracelet in two turns on the right arm (fig.85: 8). It was made of the wire with circular section. The bracelet in four turns made of the flat strip with sharpened edges was found on the left arm (fig.85: 9).

There was a large flint blade with a retouch between the right hand and the body (fig.86: 2).

There was one row of copper beads between the arms, where absent hands should be placed.

Three rows of the same beads were found on the knees. Two of them had specific, spherical form (fig.85: 2). They were made of flattened, concaved plates.

Burials 4a-5a were found to the east from the burial 2a. There was no a stone group above them. A spot of solid humus sand with red ochre was discovered at the depth of 1,1 m. An oval spot oriented from north to south (1,75 x 0,75 m) was in its northern part. The second oval spot (0,8 x 0,6 m) was placed in southern part. There was a small vertical stone plate in western part of the spot. Spots kept their solid structure up to the depth of 1,4-1,3 m.

Remains of the disturbed burial 4a were found at a depth of 1,2 m. They included child teeth and fragments of belt from *Unio* shells.

Burial 5a was discovered at a depth of 1,35 m. Judging from skeleton remains (fragments of arms, leg bones and scull) skeleton lay flexed on the back with head to the north.

There was red ochre under the skeleton as well as on it. Tooth of ovicapries was found on the knees.

Analyses of metal artifacts showed, that they are similar to the copper adornments of Tripolye A and B I (Рындина 1998).

YAMA CEMETERY

It was situated on the watershed of Severskiy Donets, Kamennaja and Bahmutka rivers to the north from Yama of Donetsk oblast (Телегин 1966). The majority of burials were destroyed during irrigation reservoir building. D.Y.Telegin in 1966 excavated remains of cemetery under a kurgan mound.

A stone tomb was found in loamy soil in 50 cm from a central pit of the kurgan (fig.87: 1). It had quadrangular form (1,8 x 1,85 x 0,5 m) and was made of flat sandstone plates of different size. Some of them were 90 x 50 cm with a thickness of 15 cm. Tomb walls were faced with the vertical plates, in some places even in three rows. The tomb was divided into two parts by stone plates and was overlapped by large plates, which leaned on the walls and partition.

When the plates were took down, two skeletons, flexed on the backs, were found under a layer of ground with ochre (hickness of 10-15 cm) (fig.87: 2). Their arms were bended, while the hands lay near the pelvis. The sculls were oriented to the north-east (31 degrees) that assumes their northern orientation.

The skeletons were intensively painted with ochre. There was a flat stone under the head of one skeleton. Bones were badly preserved and only long bones of extremities, ribs, collar-bones, pelvis and traces of fingers phalanges were found. The scull of eastern skeleton was destroyed, while western one was damaged by the plate of covering.

There were the following objects near eastern skeleton. A large flint blade with retouch was found under the knees (fig.87: 5). Its dorsal side lay downwards and a point directed to the scull.

A dart head fragment was discovered near the proximal edge of humeral bone (fig.87: 4).

A small fragment of medium flint blade was found above the bones of chest (fig.87: 3).

There was a fragment of large flint blade with retouch near the scull of the second skeleton and to the left from the stone partition (fig.87: 8).

According to worker's assertions, that tomb was similar to the graves, which were destroyed by them in 25 m to the west from it. A pit (1,6 x 1,65 m), which form was similar to the square, was really found there. Its depth in subsoil was about 1 m from the surface and it was fulfilled with soil, which was painted with ochre. Dispositions of other tombs are unknown.

There were flint tools, which were made of high-quality flint from the Seversky Donets region, as well as the objects from the tomb. Traces of ochre were found on them. The following finds were related to the destroyed burials: a cone-shaped core (fig.88: 1), six blades and their fragments (fig.88: 2, 3, fig.89: 2, 4), two retouched blades (fig.88: 4, 5), scraper on the large blade (fig.89: 3), two bifacial dart heads (fig.87: 6, 7), greenish stone axe (fig.89: 1) and flint axe (fig.89: 5).

3.2. BURIALS OUTSIDE THE SETTLEMENT TERRITORY

3.2.1. NORTHERN CAUCASUS

STANITSA BATURINSKAJA, kurgan 3

The burial mound was investigated by V.S.Bochkarev in 1980 near stanitsa (Cossack village) Baturinskaja in Bruhovetskiy district of Krasnodar Territory (Шарафутдинова 1983). The kurgan included four Eneolithic burials: 14, 15, 17, 20 (fig.90: 1). The primary burial 15 belonged to a child. Other burials were situated to the north-east from it. They were made in oval pits, where the skeletons lay flexed on the backs with heads to the east (burials 14, 15, 20) and west (burial 17) (fig.90: 2, 3). Their hands were situated on the pelvises. Pit bottoms and bones were intensively painted with ochre.

Two burials were paired. Burial 14 included an adult and child. There was the second, so-called "partitioned skeleton", near the legs of adult skeleton in burial 20. E.S.Sharafytdinova suggested, that there were remains of ritual sacrifice.

Grave godos of these burials included medium flint blades with retouch (fig.90: 4, 5) and fragment of metal bead, which was not preserved.

There was a fragment of vessel with sand inclusions in one grave.

VERKHNY AKBASH

Kurgan was investigated near village Verkhny Akbash in Kabardino-Balkaria (Кореневский, Наглер 1987).

Burial 11 was found in the center of the kurgan in a rectangular pit (2,3 x 1,4 m). A skeleton lay flexed on the back with head to the east (fig.91: 10). It was abundantly painted with ochre, especially near cannon-bones, feet and pelvis.

There was a flint axe near the pelvis, a fragment of medium blade and a flint chip near the right hand (fig.91: 11, 14).

There were two copper plates on the chest. More, than 30 copper plates of bulging form were fixed near the legs. Their size varies from 2,1 to 1 cm (fig.91: 12, 13).

There also was a copper spiral under the scull.

S.N.Korenevskiy and A.O.Nagler synchronized the burial with the Varna cemetery and Karbunsky hoard.

VESELAJA ROSCHA, kurgan 15, burial 1

The kurgan was investigated near village Veselaja Roscha in Alexandrovsk district of Stavropol Territory (Романовская 1982, с.173-175; Кореневский, Петренко, Романовская 1986, с.53).

A rectangular pit (1,9 х 1,4 m) was put into subsoil on 20-30 cm (fig.91: 1). Walls slightly converged to a bottom. There was a lot of ochre in the pit infill.

The skeleton lay flexed on the back with head to the east. The left arm was extended along the body, while the right was slightly bended. There was a layer of ochre (thickness up to 5 cm) above it.

There was a vessel with a flat bottom to the left from the scull, which lay on the side (fig.91: 2). Its clay has chamotte and organic admixture, as well as some white inclusions. The pot was decorated with nail imprints on the rim and its surface was smoothed. It had yellow color and ochre traces.

A blade from a boar fang was found on the chest (fig.91: 7). There were notches on its edges. Four copper pendants, which could be fixed to the boar fang, were found below (fig.91: 3-6).

There was a medium flint blade near the left arm in the lower part of ribs (fig.91: 8).

Authors of publication related the burial to the Sredny Stog-Khvalynsk cultural-historical area and dated to the second half of IV millennium bc. On their opinion, the copper pendants find some analogies in the Chapli cemetery, while the vessel is similar to ceramics of the Khvalynsk culture (Кореневский, Петренко, Романовская 1986, с.53). However I should note, that the rim shape and absence of ornamentation on the vessel from Veselaya Roscha are more similar to one of the pottery group from the fourth and fifth layers of the Razdorskoe settlement in the Lower Don, than to the ceramics of the Khvalynsk culture (fig.91: 9).

VESELAJA ROSCHA III, kurgan 24, burial 3

The kurgan was investigated near village Veselaja Roscha in Alexandrovsk district of Stavropol Territory (Державин 1989).

The burial 3 was the primary one. Sandstones were found in a pit infill, while the form of pit was not traced. A badly preserved skeleton of man lay flexed on the back with head to the east (fig.92: 1).

A light brown vessel with a point bottom ornamented with six rows of pits and nail notches on a rim was found near the right shoulder. A height of the vessel is 11 cm (fig.92: 2).

There were two small stones for grinding of ochre near the pot.

A flint blade of medium size without traces of using was found before the scull (fig.92: 6).

There was a flint scraper on a shortened large blade (or blade flake) near the back of the head (fig.92: 4).

A fragment of a tool on a large blade was found near it (fig.92: 3).

A bifacial tool on a medium blade was found near the left collar-bone (fig.92: 5). Judging from traces on its end, it was used as a drill.

There was a long blade of medium size near it (fig.92: 7).

GROZNY

A skeleton lay flexed on the back was found in Grozny (Милорадович 1956). It was powdered with red ochre and accompanied with a large flint blade with retouch, as well as a pendant from marl (fig.93: 7, 8).

KOMAROVO, kurgan 2, burial 18

The kurgan was investigated by N.I.Gidzhraty and A.O.Nagler near village Komarovo in Mozdok district of Northern Osetia (Гиджрати 1986).

The primary burial 18 was made in a rectangular pit with rounded corners with a depth of 40-50 cm. The skeleton lay flexed on the back with the head to the east (fig.93: 1). The hands of slightly bended arms were situated on the pelvis. Bones, a pit bottom and inventory were painted with ochre.

There was a triangular stone polished axe on the chest (fig.94: 4), a large retouched blade from a flint in the right hand (fig.93: 5), a bone rod (fig.94: 3) and two flint scrapers on medium blades near the right shoulder (fig.93: 2, 3).

The second bone rod (fig.93: 6)and a vessel from red clay with small flat bottom were found in a pit infill (fig.94: 5). The pot was ornamented with pearls under a rim and notches on a rim.

A fragment of stone bracelet was found on a level of ancient surface (fig.94: 6). The author of excavations also related a bifacial tool, which was found in the Sauromatian burial 14 of the same kurgan, to that burial (fig.93: 4). Traces of ochre, similar in color to ochre from the burial 18, were found in its microcracks.

N.I.Gidzhraty synchronized this burial with the Khvalynsk culture (Гиджрати 1986).

KOMAROVO, kurgan 7, burial 9

The kurgan was excavated near village Komarovo in Mozdok district of Northern Osetia (Кореневский, Наглер 1987). The primary burial 9 was made on a small hill under a kurgan with diameter of 10-12 m and height of 1 m. A burial pit form was similar to rectangle (1,35 x 0,78 m). There was a layer of subsoil from the grave around the pit.

The skeleton lay flexed on the back with the head to the east and the hands connected on the pelvis (fig.94: 1). Bones and a pit bottom were painted with ochre. There were pieces of ochre in the pit infill.

A bird bone with a length of 22,6 cm lay to the left from a humeral bone (fig.94: 2).

A big flint blade with retouch and length of 17,2 cm was found to the right from a scull (fig.94: 7).

STARONIZHESTEBLIEVSKAJA

Kurgan was investigated near stanitsa Staronizhesteblievskaya in Krasnoarmeisk district of Krasnodar Territory (Rezepkin 2000). A diameter of

kurgan was 47 m, while its height - 5,9 m. It included 31 burials, five of them belong to the Early Eneolithic (13, 13a, 14, 29, 30). According to A.D.Rezepkin (2000), those burials were overlapped with kurgan, because their depth from an ancient surface was small, especially the depth of burial 13A.

Burial 13

It was found in 12,2 m to the north-north-west from a permanent bench mark. Oval pit (1 x 0,75 m) was made at a depth of 6,04 m from a permanent bench mark and 0,26 m from the ancient surface.

The skeleton of adult lay on the back with the head to the north (fig.95: 1). The arms were slightly bended, while the hands were situated on the pelvis. The bones were intensively painted with ochre.

There was a large flint blade to the left from the scull near collar-bone (№1 on the burial plan, fig.95: 25).

Nine pendants from deer teeth (№4, fig.95: 19-24), which were found on the scull and pelvis, were mentioned in the text of publication, but on the drawing we have seen only one pendant on the knee with the lack of them on the pelvis.

Five prolonged beads, which were oval in section, as well as 97 circular bone beads, were found near the pelvis (fig.95: 13-18). There also were 28 small circular nacre beads (fig.95: 9-12) and 7 ornamented blades from boar fangs (№2, fig.95: 2-8).

Burial 13A

It partially disturbed the burial 13 and was made in a rectangular pit (0,85 x 0,75 m) at the depth of 5,84 m from the permanent banch mark and 0,06 m from the ancient surface.

Badly preserved skeleton of child lay, perhaps, flexed on the back with head to the east (fig.96: 1). Three cortical bones, finger phalanges and milk teeth were found. There also were traces of ochre at a bottom of pit.

Four blades from boar fangs (№4 on the burial plan, fig.96: 3-6), circular bone beads (№1, fig.96: 2) and a fragment of bone object with a hole (№3, fig.96: 8) were found among the bones.

There was a massive bone object in a pit infill (fig.96: 7).

Burial 14

It was situated in 0,8 m to the east from the burial 13A. A rectangular pit (1,45 x 0,8 м m) was made at the depth of 6,08 m from a permanent bench mark and 0,3 m from an ancient surface.

The skeleton of adult lay on the back with head to the south (fig.96: 9). The left arm was extended along the body, while the hand was absent. The right arm was slightly bended with the hand on the pelvis. It was mentioned, that the burial was intensively painted with ochre, but there was only a spot of ochre above the right part of pelvis on the drawing.

There was a fragment of a large flint blade near the right shoulder (№1 on the burial plan, fig.96: 14).

A medium blade was found near the scull (fig.96: 13).

A scraper on a large blade (№1 on the burial plan, fig.96: 12) was found on the scull.

Fourteen small nacre beads were found on the neck (№2, fig.96: 19, 11).

Burial 29

It was situated in 13 m to the south from the burial 13. A rectangular pit (1,35 x 0,8 m) was made at the depth of 6,34 m from the permanent bench mark and 0,56 m from the ancient surface.

The skeleton of adult lay on the back with the head to the east (fig.97: 1). The arms were bended, while the hands were found on the stomach. The

bulldozer destroyed the legs, but, judging to the pit size, they were bended. The burial was intensively painted with ochre.

There were six pendants from deer teeth (№1 on the drawing, fig.97: 13, 14).

Nineteen jet beads were found between the neck and lower part of the pelvis (№2, fig.97: 2-5).

A cylindrical bone bead (№4, fig.97: 8) and two stone cylindrical beads of white color (№4, fig.97: 6, 7) were found near the scull.

There were 74 circular bone beads (№4, fig.97: 11, 12) and 80 circular small nacre beads (№3, fig.97: 9, 10) near the pelvis.

Four blades from boar fangs (№5, fig.97: 15-18) were found to the right from it.

Burial 30

It was situated in 4 m to the north from the burial 29 and in 2,3 m to the north-west from the permanent bench mark. A rectangular pit (1,76 x 1,3 m) was made at the depth of 6,2 m from the permanent bench mark and 0,42 m from an ancient surface. It included three skeletons.

The first skeleton lay flexed on the back with the head to the east in western part of the pit (fig.97: 19). The arms were extended along the body. The feet were found in a hollow. The skeleton was intensively painted with ochre.

A bone awl was found between thighs near the pelvis (fig.97: 20).

Sixteen circular bone beads lay on the neck and under the pelvis of adult skeleton (№1, fig.97: 25, 26).

54 pendants from deer teeth were found near the left hand (№2).

There were 124 pendants from deer horn, which imitated deer teeth, near the belt and not far from the left forearm (№3, fig.97: 27, 28).

Two fragments of medium flint blades (№5) were found on the right side of chest. Two fragments of the same blades were discovered above the pelvis (fig.97: 21-24).

There were badly preserved children skeletons to the right from it. One of them had no legs, scull and some parts of arms. Another lay without anatomical order. Probably, children burials originally were made on the back.

An animal tooth was found in the south corner of the pit (№6 on the drawing).

STANISTA SUVOROVSKAJA, kurgan 1, burial 4

The kurgan was excavated by A.L.Nechitailo near stanitsa Suvorovskaya in Predgorny district of Stavropol Territory (Нечитайло 1979).

The primary **burial 4** was made in the center of kurgan in a rectangular pit with rounded corners (2 x 1,1 m). Its depth from the ancient horizon was about 1 m. The pit was overlapped with a wooden covering, which fell into pit.

The skeleton of man of medium age lay flexed on the back with the head to the east. The hands were extended along the body. A rectangular hole (56,42 x 11,25 mm) was made in a parietal part of scull with help of a sharp instrument. This hole was made in the form of cone, so inner size of it was 42,92 x 7,5 mm.

The skeleton and pit bottom were intensively painted with ochre. There was an ochre spot near right shoulder.

There was a retouched blade made of brown transparent flint with a length of 19 cm and width of 2,5 cm in the right hand.

The burial was related to the Early Eneolithic (Кореневский, Наглер 1987).

3.2.2. REGIONS LOCATED TO THE WEST FROM THE SOUTHERN BUG

GONOVA MOGILA

Kurgan was investigated by M.Kinchev and B.Borisov in 1964-1965 near village Tergovishte in "Maritsa-Iztok" district of Nova Zagora region (Rassamakin 2004). The burial mound was practically destroyed and only area 12 x 7 m preserved, where three burials were found. The burial 1 was related to the Early Eneolithic (fig.98: 1). On Y.Y.Rassamakin' opinion, the burial 2 also should be related to the Eneolithic, but it had no inventory, and it is difficult to determine its age.

Burial 1

The skeleton was flexed on the back with the head to the south and the arms extended along the body. A contour of a pit was not traced.

There was a fragment of large blade with a length of 17,6 cm and a width of 2,7 cm on the hip-bones (fig.98: 3). It was made of transparent light gray obsidian.

A copper bead and copper fragments were found near the chest.

Burial 2

It was made in a rectangular pit (2 x 1,1 m). A skeleton lay flexed on the back with head to the south (fig.98: 2). The arms were bended, while the hands were situated on the stomach.

A pit bottom and the skeleton were painted with ochre.

There also were stones from each side of the skeleton.

DECEA MUREŞULUI

A cemetery near village Decea Mureşului in the north of Romania was investigated in 1912 (Kovächs 1944). It included 15 burials, the majority of which was oriented to the south-west (fig.99). Their faces were turned to the east.

Burial 1 was located at the depth of 43 cm. The skeleton lay flexed on the back with arms extended along the body and the scull oriented to the south (210 degrees).

There was a spot of ochre near the left thigh with a diameter of 12 cm.

There was a medium flint blade near the left arm on the huckle-bone (fig.100: 2).

Burial 2 was partially destroyed by ploughing. Probably, the skeleton was also flexed on the back with the head to the south (210 degrees).

There were 16 intact and 6-8 broken beads, which were made of freshwater shells (fig.100: 3). Their diameter was about 23-24 mm.

Burial 2(1) was disturbed. Two child teeth, some bones and 18 intact and 5-8 broken beads from *Unio* were found at the depth of 15 cm (fig.100: 4). A pit infill was painted with ochre.

Burial 3 was found at the depth of 41 cm. The skeleton was flexed on the back with the arms extended along the body and the head to the north (35 degrees). The scull was trepanned. There also was a spot of ochre near the left leg.

A large flint blade with a length of 18 cm lay in the right arm (fig.100: 1).

Belt from about 310 copper beads was found on the waist (fig.100: 6).

Burial 3 (1). There was a small area painted with ochre at the depth of 17 cm, which indicated, that there was a children burial. A small fragment of scull preserved, half a liter of red ochre and 70 copper beads with a diameter of 2 mm were found near (fig.100: 5).

Burial 4 was found at the depth of 30 cm. The skeleton lay flexed on the back with the arms extended along the body and the head to the north (45 degrees). The scull, which was partially broken by the soil pressure, was trepanned above the right ear. There was a circular hole with a diameter of 5 cm.

A spot of red ochre was found near the right knee, while legs and arms were also painted.

A small broken cup was found beyond the scull, as well as copper torque on the neck (fig.101: 3).

A medium flint blade with a length of 17 cm was in the right arm (fig.101: 1).

There was a belt from copper beads with a diameter of 4 mm on the waist (fig.101: 2).

Burial 5 was made at the depth of 40 cm. The skeleton lay flexed on the back with the head to the south (225 degrees). The left arm was extended along the body, while the right arm was slightly bended with the hand on the pelvis. The whole skeleton was painted with red ochre.

There was a scraper on a short-cut blade or blade flake made of yellow flint above the right shoulder (fig.101: 4).

Inventory also included a fragment of vessel.

Burial 5 (1) was found at the depth of 40 cm. It included a spot of ochre, remains of human skeleton and hamster bones.

Burial 5 (2) was represented with the disturbed grave, which was located practically on the surface, with bones of adult, oriented to the to the south (210 degrees).

Inventory was represented with 30 intact and 10-15 broken beads from nacre with a diameter of 20-21 mm (fig.101: 5).

Burial 6 included a skeleton, which was disturbed by animals. It was found at the depth of 45 - 50 cm. The skeleton head was oriented to the south-west. There was a spot of ochre near the left leg.

Belt from 147 intact and 20-30 broken beads encircled the waist (fig.101: 6). All these beads were made of nacre and their diameter was about 10-15 mm.

Burial 7 was located at the depth of 60 cm. The skeleton of child was incomplete, while scull was destroyed. The skeleton lay flexed on the back with the head to the south (210 degrees) and the arms extended along the body. There was a spot of ochre near the leg.

A black microlithic flint blade with a length of 4,6 cm and width of 0,8 cm was found near the stomach (fig.101: 8).

Inventory also included a belt from 133 intact nacre beads with a diameter of 10-17 cm (fig.101: 7)

Burial 8 was found at the depth of 50 cm. The skeleton lay flexed on the back with the head to the south (210 degrees) and the arms extended along the body. Traces of ochre were found to the right from the scull near caxal bones and legs.

Fragments of dish were located on the left side of skeleton and to the right from the scull (fig.100: 7).

Burial 9 was found at the depth of 40 cm. Badly preserved skeleton of child lay flexed on the back with the head to the south and the arms extended along the body. Traces of ochre were found near the scull and pelvis.

There were fragments of small cup under the scull and to the left from it.

A medium flint blade with a width of 1 cm was found near the right arm (fig.101: 9).

Burial 10 was found at the depth of 1 m. The skeleton lay flexed on the back with the head to the south (210 degrees) and the arms extended along the body. Practically all bones were painted with ochre.

Burial inventory included fragments of vessels (fig.101: 10) and a copper awl with a length of 6,4 cm, which was found on the right leg (fig.101: 11).

Burial 11 was found at the depth of 35 cm. The skeleton of young man lay flexed on the back with the head to the south (200 degrees) and the arms extended along the body. The scull was disturbed and the bones badly preserved. There was a spot of ochre beyond the scull.

Two cups were found near the leg (fig.102: 7, 8).

A copper awl with a length of 11 cm lay near the right thigh (fig.102: 5), as well as a flint blade with a length of 1,5 cm near the left arm (fig.102: 6).

There was a belt made of nacre beads with a diameter of 10-20 mm around the waist (fig.102: 9).

Burial 12 was found at the depth of 1 meter. The skeleton of adult lay flexed on the back with the head to the south (200 degrees) and the arms extended along the body. Spot of red ochre was fixed near the right foot.

Three fragments of a large flint blade with a length of 22,5 cm and a copper awl with a length of 3,5 cm were discovered on the right part of caxal bone (fig.103: 1, 3).

A stone mace was found near the right thigh (fig.103: 2).

A belt from nacre beads with a length of 120 cm lay near the right cannon-bone (fig.103: 4, 5). Diameter of beads was 12-25 mm.

Fragments of vessel were fixed near the left foot.

A radocarbone date (5380±40 BP, KIA-368) defines the age of that burial about 4300-4150 BC (Govedarica 2004).

Burial 13 was found at the depth of 28 cm. The skeleton lay flexed on the back with the head to the south (210 degrees) and the arms extended along the body. A spot of red ochre was fixed near the right foot.

There was a belt made of 240 nacre beads (diameter about 12-20 mm) on the waist (fig.103: 7).

A copper awl with a length of 7 cm was found near the stomach (fig.103: 6).

There also was a vessel near the right foot (fig.103: 8).

Burial 14 was found at the depth of 70 cm. The skeleton of adult lay flexed on the back with the head to the south (200 degrees) and the arms extended along the body. A spot of red ochre was found near the left thigh.

There was a small vessel near the left foot (fig.103: 9).

A copper awl was found near the left thigh, while medium flint blade (length – 12 cm, width – 1,5 cm), broken into three parts, was lay on the right leg (fig.103: 10, 11).

Burial 15 was found at the depth of 55 cm. The skeleton of adult lay flexed on the back with the head to the south (210 degrees) and the arms extended along the body. A spot of red ochre was fixed near the right foot.

There was a belt made of 100 nacre beads (diameter about 10-20 mm) on the waist, as well as a copper awl with a length of 7 cm (fig.102: 2, 3). Beads of different size alternated with each other.

There were 30-40 beads with a diameter of 10 mm near the left wrist (fig.102: 4).

Two fragments of a medium flint blade with a length of 15 cm were found on the right leg (fig.102: 1).

Fragments of vessel were found near the left foot.

GIURGIULESTI

A cemetery investigated in 1991 near village Giurgiulesti in Vulkaneshty district of Moldova on plateau of the high left bank of Prut river (Haheu, Kurciatov 1993; Dergačev 2002). It included a cult building, sacrificial pit and five burials (fig.104: 1). Four of them, which had the eastern orientation, situated near the cult building, while the fifth burial with the south orientation was found in 9 m from it.

The cult building consisted of three riffles in the form of "П" (fig.104: 2). One of them was sided with a rammed area with a diameter of 2 m, where fireplace with a diameter of 90 cm was found.

There was a circular, perhaps, sacrificial pit with bull bones and sculls near the cult building (fig.107: 1).

Burial 1 included a skeleton of child and was made in a pit with an alcove. It was oriented to the east and painted with ochre and there was a wooden construction under skeleton.

Four copper spiral bracelets were found on the bones of right arm. One of them was made of the circular wire (fig.105: 9). It was located on the humeral bone. Another bracelet, which was made of oval wire, was located on the right elbow (fig.105: 15). Two others, which were made of circular wire, were found on the right wrist (fig.105: 11, 12).

Four copper spiral bracelets were also located on the bones of left arm. One of them was made of an oval wire. It was found on the left shoulder (fig.105: 16), while another bracelet, made of a circular wire, was placed on the left elbow (fig.105: 17). Two others, which were made of a circular wire, were found on the left wrist (fig.105: 13, 14).

Two splintered boar fangs were found on the chest. The first fang had some holes on the edges; there were cylindrical copper beads in the seven holes of lower row (fig.105: 18). The second fang had its holes on the ends (fig.105: 19). Necklace, which consisted of 75 short cylindrical copper beads (width - 0,2-0,4 cm; diameter - 0,4-0,6 cm), was attached to both fangs. A row of 420 cylindrical copper beads encircled the body and legs in three turns from the left to right.

Inventory also included fragments of seven microlithic (fig.105: 1-3, 5-7, 10) and two medium blades (fig.105: 4, 8), which were made of brown Dobrudzha flint, and two pendants from fossilized shell *Cardium edule Reeve* (fig.105: 20), five *Unio* shells without traces of handling (fig.105: 21-24), three beads from sandstone (as well as in the burial 2), remains of discoid beads from resinous black material, which fell into pieces, and four flint flakes.

Burial 2 is represented with a disturbed skeleton of child in an oval pit with an alcove. It was oriented to the east and painted with ochre.

There was an awl with the circular transverse section and sharp end in the middle of the pit (fig.106: 8).

Four copper beads (fig.106: 11-14), a flat axe from dark-green stone (fig.106: 9), nine rectangular blades from fossilized shells (*Mafgariti ferd*) (fig.106: 1-7), 26 cylindrical beads from sandstone (fig.106: 10), 35 pendants from fossilized shells: 24 from *Cardium edule Reeve* (fig.106: 15-18), 11 from *Mactra Carolina* (fig.106: 19, 20), one pendant from *Unio* (fig.106: 22) and beads from small, circular shells (?) were found. Burial was accompanied with the Gumelnitza vessel (fig.106: 21).

Burial 3 included a skeleton of child, which was buried in a catacomb (fig.107: 3). It lay flexed on the back with the head to the east, taking into account seasonal deviations of the sun (112 degrees). The right arm was extended along the body, while the left arm was bended under the right angel with the hand on the pelvis. The burial was painted with ochre and there was a plant mat under the skeleton.

Three copper spiral bracelets were found on the bones of right arm: one from a circular wire was on the right humeral bone near shoulder articulation (fig.108: 11), another from wire with an oval section – on the right elbow and the last (fig.108: 12), which was made of a wire with a D-form section, was on the right wrist (fig.108: 13).

Three copper bracelets were on the bones of left arm: one was made of the wire with an oval section and was found on the shoulder (fig.108: 14), another from wire with an oval section – on elbow and the last (fig.108: 9), which was made of wire with a circular section – on the wrist (fig.108: 10).

A ring from a copper wire with a rectangular section was found on the right temple (fig.108: 6). The same ring was on a left temple (fig.108: 7).

There was a copper awl with a circular section to the right from the scull (fig.108: 5).

A necklace from three tubular (fig.109: 13: №93, 182) and 203 cylindrical copper beads (fig.109: 1, 13: №10-27, 29-52, 54-74, 76-92, 94-115, 117-139, 141-152, 154-181), as well as six cylindrical beads from sandstone (fig.109: 13: №28, 53, 75, 116, 140, 153) lay on the chest and encircled the child body and legs a three times.

A row with two tubular beads (fig.109: 1: №198, 200) and 156 big open-ended beads with a diameter of 0,7-0,8 cm was also found on the chest (fig.109: 1: №183-197, 199, 201-310).

Two splintered boar fangs with some holes on ends and loop on a reverse side were lay one under other to the right from the scull and near the neck (fig.109: 11, 12).

There also was an axe from the sandstone (fig.108: 1), a retouched medium flint blade (fig.108: 2), two fragments of flint medium blades without retouch (fig.108: 3, 4), a conical core (fig.108: 8), two beads from sandstone (fig.109: 2, 3), nine pendants from fossilized shells (*Cardium edule Reeve*) (fig.109: 8, 10), 10 pendants from milk-teeth of red deer (fig.109: 4-7) and pendant from fossilized shell(?) (fig.109: 9) in the inventory.

Burial 4 belonged to a man of 20-25 years. It was made in a pit with flanges and a depth of more than 5 m (fig.104: 3). The pit was round in the upper part and its form was close to a rectangle in the lower part. Stone and wood coverings were used in the construction of pit. Remains of animal sculls were found in the upper part of the pit (fig.104: 4).

The skeleton lay flexed on the back with arms stretched along the body and the head to the east (fig.104: 5). The burial was painted with ochre and there was a plant mat and layer of silt under the skeleton.

There were remains of dart, which had a horn head and, perhaps, wooden shift with the golden facings in every 10 cm (fig.110: 9). Dart length was near 40 cm. That object was named as “horn scepter” in publication (Haheu, Kurciatov 1993; Телегин, Нечитайло, Потехина, Панченко 2001). A similar horn head, but without metal facing, was found in Kapulovka cemetery (Шапошникова, Бодянський 1970). Perhaps, the term “dart” or even “ceremonial dart” is more correct.

There was a composite dart (?) above the left shoulder (fig.110: 1). Its top was made of a deer horn, while wooden basement with 28 flint inserts was below. On V.A.Dergachev’s opinion, the wooden part of dart was accompanied with the leather case, which was strengthened with the 19 bone studs. Nine of them were situated from the each side of wooden basement. Two bone blades were lay as a handle on the wooded base. The whole length of it was 50 cm.

There were two spiral pendants, which were made of the golden wire, on the chest (fig.110: 4, 5).

There was a copper stiletto on the right arm with a circular handle, mushroom - shaped knob and a blade with a square section (fig.110: 2). Its length was 34,8 cm.

There was an object from deer horn with a length of 23,4 cm in inguinal place (fig.110: 6). It is called “phallus”.

Small beads from white paste lay in concentric circles to the right and to the left from the scull.

Grave goods also included a large blade, which was made of the brown Dobrudzha flint (fig.110: 12); a shoulder-blade of ovicaprids (fig.110: 8); an upper part of horn, perhaps, from a pike with a length of 14,3 cm (fig.110: 3); a disk of covering layer, perhaps, from a pike with a length of 6,5 cm (fig.110: 7); a cylindrical bead from a shell (?) with a length of 3,0 cm (fig.110: 10).

There also were some small objects from bone in the burial.

Burial 5 belonged to an adult and was made in a pit, which form was close to a rectangle (fig.107: 2). The skeleton was oriented to the south, taking into account seasonal deviations of sun (138 degrees), and lay flexed on the back with the arms extended along the body. The burial was painted with ochre.

There were two copper bracelets made of circular wire on the right arm: one was on the shoulder (fig.111: 3) and another was on the elbow (fig.111: 4).

Two copper bracelets made of a wire with oval section were found on the left arm: one was on the elbow (fig.111: 5) and another was on the forearm (fig.111: 6).

A copper bracelet from a strip lay near the elbow between the arm and chest (fig.111: 7).

There were six necklaces on the chest. The first necklace included a long bead from a turned copper blade, as well, as 60 circular copper beads, made of a thin copper blade (fig.111: 1). Their diameter was 0,4-0,6 cm.

The second necklace consisted of 75 circular copper beads, while the third necklace included 79 such beads (fig.111: 2). The fourth necklace was made of 94 beads, while the fifth consisted of 95 and the sixth –of 105 beads.

A row of beads seized the lower part of body and the legs a four times. It consisted of 582 circular copper beads.

The grave goods also included a pendant, which was made of the splintered boar fang with some holes on ends and a loop on reverse side (fig.111: 9), and a pendant from fossilized shell (fig.111: 8).

As a whole, there were 1979 copper and 5 golden items in the inventory of cemetery.

KAINARY

Two kurgans were destroyed in 1965 during the building of road in 1,5 km from railway station Kainary in Kaushany district of Moldova. They were lacated in the flood-lands of left bank of Botna river (Мовша, Чеботаренко 1969). Human bones, flint tools and adornments were found when bulldozer took down the burial mound of one of them, which was situated in 200 m from the river. According to the authors of publication, a burial was made on the ancient surface under the kurgan.

The skeleton of adult man was painted with ochre. Inventory included a Tripolye vessel with sand and white elements in clay (fig.112: 1). It was decorated with a deep ornament and more than half of it was covered with ochre. Analogies of such ceramics are known among the sites of Sabatinovka 1 type (Tripolye B I).

A directional core of circular chipping, an intact medium blade with a length of 14,6 cm and width of 2 cm and a fragment of medium blade (length – 9,2 cm, width 0 2 cm) were also found (fig.112: 5, 6, 7).

The burial was accompanied with a bracelet from a copper wire with one end sharpened, while other was broken (fig.112: 2). The wire was rectangular in the cut from inner side and oval from outer side.

Six beads from *Unio* shell were stringed on the bracelet (fig.112: 3). They had oval and circular form with a diameter up to 2 cm.

A copper wire with a length of 40,5 cm and rectangular-oval section was also found (fig.112: 4).

KULEVCHA

The burials 27 and 33 were investigated on the territory of an ancient Bulgarian cemetery near village Kulevcha in Bulgaria (Vazarova 1986). Skeletons lay flexed on the backs with a little incline. They were oriented to the north (fig.113: 1, 2). The sculls lay on chests, while the arms were extended along the bodies. The bones were painted with ochre.

The left arm in burial 33 was slightly bended and displaced. There was a porphyry scepter near the left shoulder (fig.113: 3).

LUNGOCH (FUNDEN)

A ground burial was found in 1974 near village Lungoch (Funden) in Galatsk district of Romania on the bank of the Seret (Rassamakin 2004). The skeleton lay extended with the head to the east.

There was a golden bracelet from a rod with circular section (6,35 х 7,58 см), 44 golden rings from a wire with circular section and a diameter near 1,67 cm, a copper awl with circular section, a fragment of gray flint blade and three nacre beads (fig.114: 17-24).

REKA DEVNJA

A burial was investigated near village Reka Devnja in 24 km from Varna in Bulgaria in 1958 (Мирчев 1961; Телегин, Нечитайло, Потехина, Панченко 2001). The skeleton of adult lay flexed on the back with the head to the east. The burial was painted with ochre.

Burial inventory included 29 large and 7 small blades with retouch and without it (fig.115), five bifacial points (fig.116: 9-13), three copper adze-chisels (one with horn-like extensions (fig.116: 3), another was of the Kamenar type (fig.116: 2) and the last was represented with the Reka Devnja type (fig.116: 1); a copper wire with a width of 159 cm (fig.116: 5), nine copper beads (fig.116: 6, 7), 22 small nacreous beads (fig.116: 8) and 32 gold rings

(fig.116: 4). Nine blades were medium (fig.115: 19-27), while 18 were microblades (fig.115: 1-18).

H.Todorova (1987) and N.V.Ryndina (Рындина 1998) related the burial to the beginning of transitional period from the Eneolithic to the Bronze Age, which was synchronous to the period of Tripolye B I-II. But the inventory and analysis of metal tools, made by N.V.Ryndina (Рындина 1998, c.109-113) indicated its similarity with materials of previous times.

SUVOROVO, kurgan 1, burial 7

The kurgan was excavated near Suvorovo in Ismailovskiy district of Odessa oblast (Шмаглий, Черняков, Алексеева 1970; Алексеева 1992, c.28; Rassamakin 2004). It was located on a cape at a confluence of the Bolshoy and Maly Katlabukh.

The **burial 7** was the primary in one of two small kurgans, which were surrounded with double cromlechs with a diameter about 6 m (fig.117: 1). The adjoined to each other cromlechs were situated in the base of large kurgan, which also had its own cromlech. The big cromlech with a diameter of 13 m was made of massive plates, which stood on their edges. The smaller cromlechs were made of small rough stones. They were found on the same depth and had the similar construction that, perhaps, testifies their simultaneity.

The burial 7 was made in a trapezoid pit (1,7 x 1,4 x 0,4 m) and included two skeletons oriented to the east (fig.117: 2). One of them lay flexed on the back with the arms extended along the body.

There was a piece of coal with traces of ochre to the left from his scull (fig.117: 8).

A medium flint blade with a length of 12 cm and width of 1,5 cm was found near the right collar-bone (fig.117: 6), while a copper awl with a length of 12,5 cm, width of 0,2 cm and a circular section was found near it (fig.117: 9).

There was a medium flint blade with a length of 10,8 cm and width of 1,5 cm among the phalanges of the left hand (fig.117: 5).

An end scraper on a large blade was found near the belt and the left hand. It was broken and had some traces of burning (fig.117: 3).

There was a stone scepter on the pelvis (fig.117: 7).

The second skeleton lay to the left flexed on the right side with slightly bended legs. The arms were slightly bended, while the left hand was on the pelvis. The right arm directed to the left hand of the first skeleton.

There was a medium flint blade with a length of 9 cm and width of 1 cm near the left hand of the second skeleton (fig.117: 4).

A copper awl with a length of 9 cm and width of 0,2 cm was found among the phalanges of left hand (fig.117: 10).

There also were remains of a belt from the beads, which were made of *Unio* shells, on the pelvis and a row of nacre beads of smaller size on cervical vertebra (fig.117: 11).

FALCIU

Three burials were disturbed by an excavator in 1984 near village Falciu in Vaslui district of Romania (Popuşoi, 1994; Рындина 1998). They were painted with ochre.

Burial 1 was oriented to the east and accompanied with a flint axe, arrow and dart heads, blades, five fragments of blades, a stone axe-adze and a copper hummer of the Shiria type (fig.114: 1-10, 16).

Burial 2 was practically destroyed. The skeleton with east orientation was found in a rectangular pit, which bottom was painted with ochre.

Inventory included three rows of copper beads and eight circular big beads made of *Spondylus* shells (fig.114: 11-15).

Burial 3 was found in a pit with painted infill. It has no inventory.

CHONGRAD

Kurgan was investigated in 1962 in Eastern Hungary (Телегин, Нечитайло, Потехина, Панченко 2001). At a pit bottom an organic mat was traced, which was powdered with ochre. The skeleton lay flexed on the back with the head to the west and was painted with ochre (fig.113: 4). Its scull was trepanned with a hole on the back of head.

Inventory included an obsidian blade and beads from copper, sandstone and *Spondylus* shells (fig.113: 5-27).

3.3. CORRELATION OF THE EARLY ENEOLITHIC BURIALS AND SETTLEMENTS

Comparison of the settlement and burial materials shows, that they should be combined into one culture. First of all, the territory of settlements distribution coincides with the territory of localization of the majority of burials. It is the steppe Dnieper basin, Azov Sea area, the Lower Don and Severskiy Donets basins. Radiocarbon dates have testified the synchronism of settlements and Early Eneolithic burials.

Similarity of the burial inventory and the materials of the Early Eneolithic settlements is also an important argument for their cultural identity. It should be noted, that during the comparative analysis we have to remember about the specifics of burial inventory. For example, a set of flint objects in burials could not correspond to a settlement flint complex, due to the ritual nature of grave goods. Therefore we have so many weapons in burials (spear- and dart heads as well as axes) in comparison with a few scrapers, chisels and other tools, which were widely distributed at the settlements. But we can’t exclude, that large flint blades, which are numerous in the mortuary complexes, in addition to their household functions could be used as a weapon, too.

As a whole, traces of reutilization on the flint tools of the burial inventory are absence, but they are typical for the tools from the settlements. The implements were put into the burials broken or intact without using for a long time. The tools at settlements were used over prolonged periods, then repaired, broken and refashioned into other tools. That is why we practically have no intact blades or blades without secondary treatment at the settlements, which were far from the sources of flint, in contrast to the burials with numerous long intact blades.

In spite of the above mentioned specific, the burial inventory of Early Eneolithic cemeteries have some analogies in the materials of synchronous settlements. The analyses of flint tools of these burials show, that a treatment was oriented on obtaining of regular blades of different sizes from a cylindrical, conical and flat cores with strengthening rib as well as without it. Directional cores were dominated among them. Such cores were typical for the settlements of the Sredniy Stog culture, where a treatment was oriented on obtaining of regular blades of different sizes, too (fig.118). The cores from the burials differ bigger sizes from the cores of the settlement, which are more worn-out.

It should be mentioned, that there were not only long and wide blades in ground burials (from 2,4 cm and wider). Medium blades and microblades were found

in numerous burials, too. They are known in burials of the Alexandrovsk, Yama, Krivoy Rog and other cemeteries. The same set of blades is typical for the Early Sredniy Stog culture settlements, which are similar to the third layer of Strilcha Skelja (fig.119).

End scrapers on blades are also known among the grave goods of the Alexandrovsk, Yama and Lugansk cemeteries. Similar tools were found at the settlements, too (fig.120). There also were bifacial spear and dart heads (Razdolnoe, Semenovka, Razdorskoe), which had triangular form and flat or bulging bases (fig.120). They are look like as the finds from the Early Eneolithic cemeteries, while in the later settlements, which are similar to the second layer of Sredniy Stog, the points with concave base are numerous (fig.27: 1, 2, 6-8, 10, fig.120: 30)). Bifacial leaf tools, which were found in the burials and settlements, are also alike (fig.120: 14, 33).

Polished stone axes and bone tubules from the ground burials find analogies at the settlements, which are similar to the third layer of Strilcha Skelja, too (fig.119, fig.121: 6, 14).

It is apparent, that funeral clothes was richly decorated, especially in comparison with everyday clothes. Therefore we have so many different adornments in the burials as distinct from the settlements. But, some clothes adornments from the cemeteries find analogies in the settlement materials (fig.121: 3-5, 12, 13). Absence of analogies of copper artifacts in the settlement complexes can be related to the high price of metal and repeated use of broken copper objects, which had not become the part of site waste products studied by archaeologists.

The vessels from the Igren cemetery also find some analogies in the materials of settlements (fig.121: 1, 2, 7-11). The small beaker with partially preserved high neck and ornamentation with interweaved cord is similar to the beaker of Semenovka. At the same time, its ornamental compositions (inclined row between horizontal lines of long imprints of interweaved cord) make it closer to the pottery of Sredny Stog. Vessel with broken neck from burial 1 (excavations of 1930s), ornamented with the imprints of interweaved cord, which formed dangling triangles, is also similar to the ceramics of these settlements.

We can also relate about 20 kurgan graves of the Pontic steppe to the Early Eneolithic. The remains of burial mound in majority of cases were traced: the burial near village Vinogradnoe, the burial 9, kurgan 7 of Komarovo, etc. The burials, made on the ancient horizon without pit, also testify the presence of kurgan (the burial 1, kurgan 8 of Kyt; Kainary; burial 7 of Mukhin 2).

The similarity of the kurgan burials inventory with the materials of Early Eneolithic settlements allow us to attribute them to the Sredniy Stog culture. Ceramics from the graves near khutor Popov, Tyzlyki and funeral feast near khutor Mokry Chaltyr looks like as the pottery of Razdolnoe, Serebrjanskoe and Strilcha Skelya (fig.122: 1, 2, 4-9, 11, 12). They are unified by the shell admixture, linear and strokes ornamentation.

The Early Eneolithic age of the Kainary burial is determined by the Tripolye vessel of B I period in it.

The vessel from the burial 1, kurgan 15 of Veselaja Roscha is also similar to the ceramics of the fourth and fifth layers of settlement Razdorskoe (fig.122: 3, 10). The pot from Komarovo has some common traces (flat bottom and pearls on neck) with the pottery of the lower layer of the Early Eneolithic Zamok settlement in Northern Caucasus (Кореневский 1998а, с.120).

Pottery from the burial 7 of Mukhin 2 and khutor Semenkin is similar to the ceramics of sites of the Sredny Stog type and, especially, to the vessels from the fourth layer of Strilcha Skelja (fig. 122: 6-7, 13-16). Ornamental compositions made of dangling arched bands, which were filled with the comb imprints, are common for them. They are also unified by the high neck and maximum diameter of body in the upper third of it.

Analogies to the inventory of kurgan burials also can be traced in the flint complex of the Early Eneolithic settlements and the grave goods of ground cemeteries. The cores, large and medium flint blades, scrapers on blades, triangular points, flint and stone axes, narrow bone tools are among their common features (fig.118-120). Funeral clothes from burial 15, kurgan 1 of Veselaya Roscha was accompanied with the ornamented blade from boar fang with holes and copper pendants in the form of shell, which were close to the adornments from the Chapli, Liventsovka and Giurgiulesti cemeteries. The circular nacre beads from Mukhin, Suvorovo, Kainary and Staronizhesteblievskaja, as well as the cylindrical bone beads from khutor Popov, the stone beads and blades from boar fang of Staronizesteblievskaya burials are also similar to the ornaments of ground cemeteries.

In addition to the listed similarities of grave goods the kurgan and ground burials of the Early Eneolithic are unified by the dominating position of skeletons, which lay flexed on the back, northern and eastern orientation, using of stone in the burial rite, as well as the organic mats, funerals feasts and catacombs. But kurgan burials have some specific features. Besides burial mound, for kurgan interments the stone cromlechs are known (Suvorovo, kurgan 1, grave 4). We should mention, that stones, as a whole, was not used so frequently in construction of the kurgan burials as in the ground cemeteries, where the stone groups fixed the place of graves on the ancient surface. There is also a chalk powdering in kurgan burials, which was not found in the ground burials. We also know kurgan burials, where the skeletons lay flexed on the side, while that position has not fixed in the ground burials up to now.

The inventory of kurgan burials was more various in comparison with the grave goods of the ground cemeteries and it included larger quantities of vessels. Pottery was found in the kurgan funeral feasts outside the graves (Mokry Chaltyr, Vinogradnoe), while the funeral feasts of ground cemeteries included only animal bones and flint wares (Chapli).

Thus, the inventory of kurgan burials has found the analogies in the materials of ground burials. At the same time the Early Eneolithic kurgan interments are similar to the Middle Eneolithic burials under the kurgans in such details of funeral rite as construction of burial mound, cromlech, funeral feast with ceramics, wooden covering of pits, organic mat, chalk powdering, placement of pots in graves. The grave goods from ground burials find the analogies only in the oldest settlements (Razdolnoe, the third layer of Strilcha Skelja and the fourth layer of Razdorskoe), whereas the inventory of some kurgan burials (the flakes and ceramics with the comb ornamentation) is similar to the materials of the second layer of Sredny Stog and the fifth layer of Razdorskoe. These facts allow us to suggest, that the most of kurgan burials are younger than majority of the ground cemeteries.

The coincidence of territory of distribution of the Sredniy Stog settlements and majority of the Early Eneolithic burials, simultaneity of their existence, similarity of funeral inventory with the settlements materials, prove their belonging to the same culture, that should be named the “Sredny Stog culture”.

CHAPTER 4. VARIANTS, CHRONOLOGY AND PERIODISATION OF THE SREDNIY STOG CULTURE

Territory of the Sredniy Stog culture includes the steppe Dnieper and Don areas, Severskiy Donets basin and Azov Sea area. All settlements and the majority of burials are situated here. The analyses of their materials have revealed specifics of two territorial groups (western and eastern), which might be considered as variants of this culture. The border between them passes on the Kalmius. Only burials, which can be conditionally related to the eastern (burials of Northern Caucasus) or western variants (burials to the west from the South Bug), are known outside the main territory of the Sredniy Stog culture.

4.1. VARIANTS OF THE SREDNIY STOG CULTURE

The monuments of eastern variant occupy the Severskiy Donets basin and the steppe Azov Sea area from the Don to the Kalmius. A few eastern variant sites with not numerous pottery are also known in the modern forest-steppe Don basin (fig. 123). It testifies the penetration of separate groups of the Early Eneolithic population into this region. It unifies some settlements (fourth and fifth layers of Razdorskoe, Samsonovka (fig.124: 1), Tsimljanskoe (fig.124: 2, 3), Alexandria, Serebranskoe, Chernikovo Ozero 1a, Razdolnoe), ground burials (Karataevo, Mariupol, Alexandrovsk, Yama, Bessergenovka, Liventsovka) and kurgan burials (kurgan 5, burials 27, 33 in Koisug II; kurgan 5, burials 8 and 17 in Krasnogorovka; kurgan 1, burial 2 in Lugansk; burial 6 in Moskva 1; kurgan 3, burial 6 in Mukhin 1; kurgan 5, burials 7, 9, 30 in Mukhin II; kurgan 31/7, burial 4 in khutor Popov; kurgan 2, burial 6 in Mokry Chaltyr; Semenkin; kurgan 9, burials 27, 28, 30, 31 in Tuzluki).

The Sredniy Stog monuments of the steppe zone from the Kalmius to the Dnieper are related to the western variant: the third layer of Semenovka 1; the third ceramic layer of Kamennaya Mogila 1; the third and fourth layers of Strilcha Skelya; Zolotaja Balka; Sobachki, Kizlevy; burials in Novodanilovka; Petro-Svistunovo; Chapli; Igren; Krivoy Rog; kurgan 8, burials 1 and 7 in Kut; kurgan 3, burial 15 in Vinogradnoe and, perhaps, the layer of Sredny Stog culture from the excavation trench 3 of Razdolnoe.

Ceramics of each variant had its own specifics in spite of general similarity of the Sredniy Stog culture pottery. Vessels, ornamented, mainly, with lines, often forming parquet compositions, herring-bone patterns and horizontal lines, are typical for the eastern monuments. Strokes were used, mainly, for the dividing of ornamental zones. Imprints of long comb stamp, sometimes drawn in «stepping» manner, decorated a considerable part of vessels. As a whole, horizontal zoning is dominating in ornamental compositions. Shoulders and necks of the vessels, as well as their rims and, sometimes, inner surface were decorated. Pottery with point, rounded and flat bottom was made.

In contrast to the eastern variant, which ceramics changed insignificantly during its existence, we can distinguish two chronological groups of the western variant: monuments of the third layer of Strilcha Skelja type and monuments of the second layer of Sredniy Stog type. Pottery with strokes and linear ornamentation dominated in the first type of monuments, while the majority of pottery in the second type had comb ornamentation. The first type of monuments is the most similar to the monuments of the eastern variant, but its pottery was mainly ornamented with strokes and their combinations with lines. Lines and comb imprints used quite rarely, then in the pottery decoration of the eastern variant. Ornamental compositions included complex figures, such as arches, meanders, hanging triangles and rectangles. Technique of framing pictures with different hollows was widely distributed. Only shoulders and rims of the western variant vessels were decorated, while their necks were non-ornamented. For the

eastern variant the decoration of upper part of vessel, including neck, is typical. Pottery with a flat bottom is not known on the western territory.

Differences in the ceramics of eastern and western variants increased with time, especially when monuments of the third layer of Strilcha Skelya type were replaced with the monuments of the Sredniy Stog type with high neck and comb ornamentation.

Two variants the Sredniy Stog culture also differed in their flint complexes. The use of blades for making tools was typical for the western region. The population of eastern variant in the course of time proceeded to making tools on flakes. This population also widely used woodworking instruments, including polished tools from soft rock, which were not widespread among the population of the western region.

We can trace some specifics in funeral rites, especially on the main territory of the Sredny Stog culture, which coincides with the territory of settlements distribution. Woodworking tools are found most often in the grave goods of the eastern group (Table 11). Axe was found only once in the burial of the western variant (excluding the materials from destroyed burials of Petro-Svistunovo). Flint tools are also more typical for the burial inventory of the eastern variant (Table 11), which territory includes sources of qualitative raw materials in the Severskiy Donets basin. It is interesting, that the flint tools popularity is equal for the burials of both variants outside of the main territory of the Sredniy Stog culture (in Northern Caucasus and to the west from the South Bug).

Table 11. Distribution of some grave goods in the burials of the eastern and western variants of the Sredniy Stog culture

Grave goods	All burials		Burials on the area of the settlements location		Burials outside the area of the settlements location	
	Eastern variant	Western variant	Eastern variant	Western variant	Eastern variant	Western variant
All skeletons	61	61	36	29	25	32
Skeletons with copper wares	18 – 30%	20 – 33%	9 – 25%	6 – 21%	9 – 36%	14 – 44%
Skeletons with woodworking instruments	6 – 10%	1 – 2%	2 – 6%	1 – 3%	4 – 16%	-
Skeletons with flint wares	41 – 67%	31 – 51%	26 – 72%	11 – 38%	15 – 60%	20 – 63%

We can also trace some regularity in the distribution of types of flint tools (Table 12). First at all, flakes and tools were found more often in burials of the eastern variant. We can suppose, that the eastern population, who lived near the sources of flint (the Severskiy Donets basin), could afford themselves to accompany their dead with tools and semi-finished products (flakes), while the western population, who lived far from the sources of qualitative flint, had to limit the number of tools, which were used during the funeral ritual.

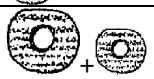
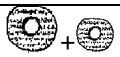
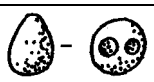
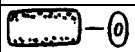
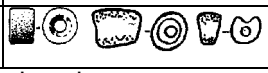
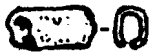
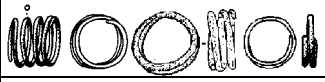
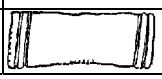
Table 12. Distribution of flint wares in the burials of the eastern and western variants of the Sredniy Stog culture

Grave goods	All skeletons		Burials on the area of the settlements location		Burials outside the area of the settlements location	
	Eastern variant	Western variant	Eastern variant	Western variant	Eastern variant	Western variant
Skeletons with flint wares	41	31	26	11	15	20
Microblades and their fragments	3 – 7%	3 – 10%	2 – 8%	1 – 9%	1 – 7%	2 – 10%
Medium blades and their fragments	26 – 63%	15 – 48%	17 – 65%	5 – 45%	9 – 60%	10 – 50%
Large blades and their fragments	20 – 49%	11 – 35%	12 – 46%	6 – 55%	8 – 53%	5 – 25%
Flakes	8 –20%	1 – 3%	6 – 23%	1 – 9%	2 – 13%	-
Points	5 – 12%	4 – 13%	5 – 19%	2 – 18%		2 – 10%
Other tools	5 – 13%	2 – 6%	2 – 8%	1 – 9%	3 – 20%	2 – 10%

The clearest differences were found in adornments of the funeral clothes of the Sredniy Stog culture variants (Table 13). As a whole, the number of dead, who had any adornments, is rather equal for both variants. We can see on the Table 13, that the eastern population adorned clothes with stone beads, pendants from deer teeth and their imitations, blades-braids from boar fangs, which are unknown in the western variant burials. Bone beads obtained wider distribution among inhabitants of the eastern variant, too. At the same time, round bone beads are unknown in the western group. Analyze of spreading of nacre beads has shown that population of the western variant preferred beads with diameter larger, than 20 mm, while the eastern population adorned clothes with the beads of small and medium diameters.

Taking into account the specifics of monuments of the western and eastern groups on the main territory of culture, we can correlate the burials, which are situated outside the area of settlements distribution, with them. Probably, burials of Northern Caucasus can be related to the eastern variant. Among them are kurgan 3, burials 14, 15, 17, 20 in Baturinskaja; burial 11 in Verkhniy Akbash; kurgan 15, burial 1 and kurgan 24, burial 3 in Veselaja Roscha; kurgan 7, burial 9 and kurgan 2, burial 18 in Komarovo; burials 13, 13A, 14, 29, 30 in Staronizhesteblievskaja; kurgan 1, burial 14 in Suvorovskaja and Grozny. The similarity of ceramics from kurgan 15, burial 1 in Veselaja Roscha with the pottery of Razdorskoe 1 settlement testifies it (fig.91: 2, 9), as well as the presence in the burials of Staronizhesteblievskaja the plates from boar fangs, deer teeth and round bone beads, which are similar to the finds from the Mariupol and Karataevo cemeteries. Stone pendant from Grozny looks like as the adornment from the Neolithic burial of Mariupol cemetery. In addition to it, the burials of Northern Caucasus have analogies with the monuments of eastern variant in multiplicity of the flint tools and presence of the stone axes. V.N.Danilenko included kurgan burials near stanitsa Ust-Labinskaja and Kubanskaja in Northern Caucasus to the Sredniy Stog circle (Даниленко 1974, c.68). According to the figures in his book, ceramics of these burials are very similar to the Sredny Stog pottery. Perhaps, the population of the eastern variant left these burials, too.

Table 12. Distribution of the main type of the adornments in the burials of the eastern and western variants of the Sredniy Stog culture

Adornments		All burials		Burials on the area of the settlements location	
		Eastern variant	Western variant	Eastern variant	Western variant
All skeletons		62	61	37	29
Skeletons with adornments		29 - 47%	30 - 49%	15 – 41%	11 – 38%
Skeletons with nacre beads		11 – 39%	20 – 69%	7 – 50%	6 – 55%
Large nacre beads		-	11 –38%	-	5 – 45%
Medium nacre beads		-	2 –7%	-	-
Large and medium nacre beads		1 – 4%	7 – 24%	1 – 7%	1 – 9%
Medium and small nacre beads		2 – 7%	-	2 - 14%	-
Small nacre beads		8 – 29%	1 – 3%	1 – 7%	-
Cylindrical nacre beads		2 – 7%	-	2 – 14%	-
Skeletons with bone beads		9 – 32%	2 – 7%	5 –36%	2 – 18%
Round bone beads		6 – 21%		2 – 14%	
Cylindrical bone beads		5 – 18%	1 – 3%	3 – 43%	1 – 9%
Ring-shape bone beads		1 – 4%	1 – 3%	1 – 7%	1 – 9%
Skeletons with stone beads		6 – 21%	-		
Skeletons with copper beads		11 – 39%	11 – 38%	6 – 43%	5 – 45%
Ring-shape copper beads		10 – 36%	10 – 34%	5 – 36%	5 – 45%
Cylindrical copper beads		4 – 14%	2 – 7%	1 – 7%	-
Shell-shape copper pendants		2 – 7%	1 – 3%	1 – 7%	1 – 9%
Ring-shape metal pendants		1 – 4%	2 – 7%	1 – 7%	-
Metal spiral pendants		3 – 11%	2 – 7%	1 – 7%	2 – 18%
Copper bracelets		5 – 18%	5 – 17%	2 – 14%	4 - 36%
Pectorals from wild boar fangs		5 – 18%	1 – 3%	1 – 7%	1 – 9%
Pendants from sea shells		4 – 14%	1 – 3%	-	1 – 9%
Pendants from teeth of red deer and their imitation		5 – 18%	-	1 – 7%	-
Plates from wild boar fang		5 – 18%	-	2 – 14%	-

The majority of burials, which located on the territory to the west from the South Bug (Gonova Mogila, Decea Muresului, Kainary, Kasimcha, Kulevcha, Reka Devna, Suvorovo, Falciu, Lugoch), most likely were left by the population of the western variant of Sredniy Stog culture. This is supported by multiplicity and

diversity of metal tools and absence of such adornments as deer teeth, bone beads and blades from boar fangs. Materials of the Dzhurdzhuleshty burial mound are more similar to the burials of the eastern variant in such adornments as deer teeth, stone beads, sea shells with holes and presence of polished stone axes and bone tubules. They also find some analogies in the materials of the burials in Karataevo, Veselaya Roscha and Staronizhesteblievskaja. The burial from Chongrad in eastern Hungary, where beads from limestone were found, is also more similar to the monuments of the eastern variant.

The comparison of grave goods on main territory of culture and outside the area of settlements distribution (Tables 11, 12) shows, that copper tools were found rarely in the key area of the Sredniy Stog culture. Probably, people, who carried out exchange operations and supplied the Sredniy Stog population with copper tools, were buried outside the basic area of culture, if they died during their exchange expeditions. Naturally, that in their burials, which were made during movement with the metal load, would be more the metal tools and adornments.

The specific features of two territorial variants of the Sredniy Stog culture, which were described above, have motivated separate analyzes their periodization and chronology.

4.2. CHRONOLOGY AND PERIODIZATION

Stratigraphical observations, radiocarbon dates and synchronization of archaeological material of the Sredniy Stog culture with monuments of the Tripolye culture are a basis for development its chronology and periodization.

4.2.1. CHRONOLOGY OF MONUMENTS OF EASTERN VARIANT

According to the stratigraphical evidence at the Razdorskoe I and Razdolnoe settlements, the eastern variant of Sredniy Stog culture existed after the second period of Lower Don and Late Surskaya cultures, but before the Konstantinovka culture.

Determination of the absolute age of monuments is much more complicated task. Among settlements only one of two Sredniy Stog culture layers at Razdolnoe was dated (Table 14). It was located on the trench III, which was explored in 2000, where it overlapped the materials of the second period of Azov-Dnieper culture. The lower part of this Sredniy Stog layer is dated about 4760 – 4560 BC and the upper part – 4550-4350 BC. The older Sredny Stog stratum on the other part of Razdolnoe (trench V) lay under the layer of the second period of Lower Don and Late Surskaja cultures. There are some radiocarbon dates for this Late Neolithic stratum (Kotova 2003), which determine its age about 5500-5300 BC. It means, that more archaic Sredny Stog materials of this part of Razdolnoe existed between 5300-4700 BC.

Synchronization with the Tripolye culture helps us to define chronological position of the eastern variant settlements. Pottery with pounded shell admixture, that reflects the influence of steppe population, was found on the Bernashevka settlement (Tripolye A – Precucuteni II). The bowl decorated with parquet linear pattern was found at Sabatinovka II (Tripolye A – PreCucuteni II/2). Such ornamentation is uncommon for the Early Tripolye and very similar to the pottery decoration of the eastern variant of Sredniy Stog culture, first of all, for the fourth and the lower horizon of the fifth layers of Razdorskoe and the most ancient layer of the Sredniy Stog culture from Razdolnoe.

We can consider the sherd from the Luka-Vrublevetskaja settlement (Tripolye A – Cucuteni A 1-2), ornamented with the short comb imprints in the

form of herring-bone patterns and without shell inclusions, as another manifestation of steppe influence. Fragment of pot with shell admixture in clay was also found there.

Bone plates and quadrangular shells with some holes are known in Luka-Vrublevetskaja and Bernashevka. They are similar to the adornments from the second and the fourth layers of Razdorskoe. The Karbunskiy hoard (Tripolye A – Precucuteni III/3) includes nacre plates, which are close to them.

Table 14. Radiocarbone dates of the Sredniy Stog culture

Monuments and materials	Lab. Index	BP	calBC Weninger 2005
Eastern variant			
Mariupol cemetery, grave XX1, human bone	Ki-9478	6320±70	5285±83
Mariupol cemetery, grave XX1, human bone	Ki-9479	6370±75	5358±76
Mariupol cemetery, grave XX1, human bone	Ki-9480	6345±65	5336±75
Alexandrovsk, kurgan 1 burial 46	Ki-13002	5690±70	4541±84
Rasdolnoe, trench III, square 7ст, depth 210-230 cm, animal bone	Ki-8004	5825±80	4668±92
Rasdolnoe, trench III, square 7ст, depth 190 cm, animal bone	Ki-8005	5630±90	4481±94
Dzhurdzhuleshty, human bone	Ki-7037	5560±80	4412±65
Western variant			
Krivoy Rog, grave 3, human bone	Ki-8175	6190±70	5139±97
Krivoy Rog, grave 3, human bone	Ki-8176	6020±70	4910±89
Krivoy Rog, grave 3, average statistical data	Ki-8177	6105±50	5039±90
Chapli, grave 2a, human bone	Ki-11079	5840±90	4685±102
Igrenskiy cemetery, grave 15, human teeth	Ki-8304	5745±60	4595±74
Semenovka, trench 2, square 6, depth 100-120 cm, animal bone	Ki-7674	5655±60	4484±72
Semenovka, trench 2, square 4, depth 90-115 cm, animal bone	Ki-7673	5525±70	4371±69
Strilcha Skelya, square 8, horizon 6, animal bone	Ki-8173	5630±70	4464±73
Kamennaya Mogila 1, depth 120-160 cm, animal bone	Ki-7666	5590±70	4432±60
Kainary, human bone	KIA-369	5580±50	4415±42
Strilcha Skelya, square 6, horizon 5, animal bone	Ki-8172	5480±70	4325±72
Decia Muresului, grave 12, human bone	KIA-368	5380±40	4220±86

At the same time we can consider a vessel from the fourth layer of Razdorskoe as an imitation of the Tripolye vessels forms, which are known on the Bernashevka settlement. A vertical neck with outturned rim is unusual for steppe pottery. A line of pinches on the neck of vessel with comb ornamentation from the Tsimljanskoe settlement also finds some analogies in the Tripolye ceramics.

All these facts show, that the oldest settlements of the eastern variant (the fourth layer of Razdorskoe, the oldest Sredniy Stog culture layer in trench V of Razdolnoe, Tsimljanskoe) can be synchronized with the monuments of Tripolye A (Precucuteni II and III, Cucuteni A 1-2). For this moment, the above mentioned Tripolye monuments are dated about 5400-4700 BC. Taking into account, that the Late Lower Don culture is dated about 5320 BC (Kotova 2003), the age of just listed archaic monuments of the eastern variant of the Sredniy Stog culture can be defined about 5320-4700 BC.

Materials of the lower horizon of the fifth layer of Razdorskoe are synchronized with Tripolye B I. At this period contacts with steppe population

caused the distribution of coarse pottery with shell admixture, strokes-linear and comb ornamentation (fig. 126) and, perhaps, fine pottery with dotted comb stamp among the population of Tripolye culture (Sabatinovka 1, Borisovka, Beresovskaja hydroelectric power station). We should note, that dotted ornamentation of Tripolye ceramics was very similar to the comb imprints on the pottery of the eastern variant of the Sredniy Stog culture in the length of stamp and its drawing (transversely to a surface of vessel). It is interesting, that the majority of Tripolye coarse vessels with shell inclusions had a low neck. It was also typical for the ceramics of the eastern Sredniy Stog group. Now the monuments of Tripolye B I are dated about 4700-4350/4300 BC.

Table 15. Radiocarbon data of the Tripolye culture (after Відейко 2004)

Monuments and materials	Lab. Index	BP	calBC Weninger 2005
Tripolye A			
Bernashevka, animal bone	Ki-6681	6510±55	5457±61
Bernashevka, animal bone	Ki-6670	6440±60	5406±51
Okopy, animal bone	Ki-6671	6330±65	5309±72
Korman, animal bone	Ki-6675	6270±55	5210±86
Korman, animal bone	Ki-6676	6225±60	5175±88
Babshin, animal bone	Ki-6686	6200±55	5156±81
Voronovytsja, animal bone	Ki-6677	6180±60	5132±88
Cabatinovka 2, animal bone	Ki-6737	6100±55	5030±98
Sabatinovka 2, animal bone	Ki-6680	6075±60	4968±89
Grebenukov Yar, animal bone	Ki-6673	6120±50	5069±100
Grebenukov Yar, animal bone	Ki-6674	6165±55	5116±88
Grebenukov Yar, animal bone	Ki-6672	6040±65	4932±86
Luka-Vrublevetskaja, animal bone	Ki-6684	5905±60	4774±61
Luka-Vrublevetskaja, animal bone	Ki-6685	5845±50	4692±65
Grenovka, animal bone	Ki-6683	5860±45	4713±55
Grenovka, animal bone	Ki-6682	5800±50	4643±61
Tripolye B I			
Sabatinovka 1, animal bone	Ki-7202	5805±65	4646±75
Berezovskaja HPS, animal bone	Ki-7203	5760±55	4609±67
Berezovskaja HPS, animal bone	Ki-7204	5710±60	4564±78
Ozarintsy, animal bone	Ki-7212	5470±65	4309±60
Polivanov Yar 3	GrN-5134	5440±70	4258±82
Soloncheny 2, charcoal	Ki-7213	5530±75	4374±72
Tripolye B I-II			
Kadievtsy, animal bone	Ki-7210	5400±70	4215±100
Tripolye B II			
Vladimirovka, animal bone	Ki-10854	5280±70	4115±96
Vladimirovka, animal bone	Ki-10855	5210±70	4056±91
Grebeni, animal bone	Ki-7207	5140±60	3914±83
Grebeni, animal bone	Ki-7205	5120±65	3895±77
Grebeni, animal bone	Ki-7208	5100±90	3884±94
Grebeni, animal bone	Ki-7206	5080±70	3867±77
Chapaevka, pit 36, animal bone	Ki-8063	4980±70	3799±96
Novorozanovka	UCLA-1642F	4904±300	3646±363

Ceramics of the upper horizon of the fifth layer of Razdorskoe with high neck is similar to the pottery of such Sredniy Stog settlements, as Samsonovka, Chernikovo Ozero I, Serebrjanskoe and Alexandria. This pottery also find analogies (high neck and interweaved cord ornamentation) among the ceramics of Tripolye B I-B II settlements, which are dated about 4350/4300-4200 BC.

The chronology of the **ground burials** of the eastern variant is based on the analysis of inventory, radiocarbon dates for skeletons of the Mariupol, Alexandrovsk and Dzhurdzhuleshty cemeteries (Table 14) and synchronization with settlements of the Tripolye culture. In my opinion, the XXI, XXIV burials and cremation of Mariupol cemetery and Karataevo are the oldest. They were accompanied with the plates-braids from boar fangs, pendants from deer teeth and their imitations, round and cylindrical bone beads, nacre beads, which are similar to the adornments of burials of Neolithic Lower Don culture (the Mariupol and Karataevo cemeteries). The plates from boar fangs are also analogous to the plates from Luka-Vrublevetskaja, Bernashevka and Krabunskiy hoard. The above mentioned similarities allows us to synchronize the Early Eneolithic Mariupol and Karataevo burials with the Tripolye A sites, that is testified by the date for burial XXI of the Mariupol cemetery – 5400-5250 BC (Table 11). So, the burials of Mariupol and Karataevo can be combined with the oldest settlements of the Sredniy Stog culture and should be dated for about 5300-4900 BC.

Perhaps, the burial in Grozny, which was accompanied with a stone pendant similar in form to the adornment from the Neolithic part of Mariupol cemetery, also belongs to one of the oldest burials.

Metal from the Alexandrovsk cemetery indicates that its burials were synchronous to the Tripolye A and B I. Date of burial 46, kurgan 1 determines its age about 4850-4700 BC (Table 14). Copper pendants in the form of shell from the burial 10, kurgan 10 of Alexandrovsk are similar in form to the pendants of Chapli cemetery, the age of which was determined on the basis of date for burial 2a - 4700-4600 BC. These dates and analogies define the age of the Alexandrovsk cemetery about 4700-4600 BC.

According to the inventory, population of the eastern variant of Sredny Stog culture also left the Dzhurdzhuleshty cemetery. Radiocarbon date, made for one of its burials (Table 14), allows us to date it about 4470-4330 BC.

Adornment from boar fang in Liventsovka finds some analogies in the Dzhurdzhuleshty and Petro-Svistunovo cemeteries. The last is synchronized with the Tripolye A and BI on the basis of metal tools. These parallels allow us to synchronize the Liventsovka burial with Tripolye B I.

Other burials (Bessergenovska, the Yama and Lugansk cemeteries) without metal and the oldest type of adornments (plates from boar fangs, pendants in the form of teeth and bone beads) could be presumably related to the lower horizon of the fifth layer of Razdorskoe on the basis of presence of flint blades among grave goods. Although the transition from making tools on blades, which is typical for the fourth layer, to making tools, mainly, on flakes in the fifth stratum, was fixed on Razdorskoe, we can suggest some conservatism of the funeral rite. Moreover, blades (though in the lesser degree, than earlier) were used in the Don basin during the whole Eneolithic. On this basis the burial in Chongrad, which was accompanied by blade, copper and stone adornments, can be also synchronized with the lower horizon of the fifth layer of Razdorskoe settlement.

The burials near staniza Staronizhesteblievskaja seem to be the oldest among the **kurgan burials**. Their funeral clothes were decorated with plates-braids from boar fangs, pendants from deer teeth and their imitations, round and cylindrical bone beads, nacre and stone beads, which are similar to the adornments of Neolithic Lower Don culture from the Mariupol and Karataevo cemeteries. Most likely, burials near staniza Staronizhesteblievskaja are synchronous to the Eneolithic burials of the Mariupol and Karataevo cemeteries, the fourth layer of Razdorskoe and the oldest Sredny Stog layer of Razdolnoe.

Bone plates-braids, similar to the adornments of the Mariupol and Staronizesteblievskaya burials, were found in the burial 12 in kurgan 3 of Chogray in the Stavropol Territory (Кореневский, Калмыков 2004). Unfortunately,

this burial was not published completely yet, but these adornments may indicate, that it is synchronous to the oldest Sredniy Stog burials.

The burial 1 in kurgan 15 of Veselaja Roscha is younger, because its vessel is similar to the pottery of the forth and lower horizon of the fifth layer of Razdorskoe, while its copper pendants have analogies with the pendants of Chapli cemetery and adornment from a boar fang is close to the ones from the Dzhurdzhuleshty cemetery. These facts allow to synchronize this burial with the lower horizon of the fifth layer of settlement Razdorskoe and the Tripolye B I. Perhaps, the majority of other kurgan burials in Northern Caucasus, which included flint blades without the oldest types of adornments (Akbash, Komarovo, burial 3 in kurgan 24 of Veselaya Roscha, Baturinskaja, Suvorovskaja), belongs to the same time.

In the Don basin the burials 9 and 30 in kurgan 5 of Mukhin 2 can be synchronized with the above mentioned burials, because their grave goods included the flint blades without the oldest type of adornments. The use of wood and chalk in the funeral rite make them closer to the burials of the Middle Eneolithic, but they were older than the Early Eneolithic burial 7 of the same kurgan.

It is likely that the kurgan burial of khutor Popov with the pot, which ornamentation and low neck are similar to the pottery of the forth layer and lower horizon of the fifth layer of Razdorskoe is synchronous to them. But the burial mound, organic mat, absence of the oldest types of adornments allow us to consider it younger, than the Mariupol and Karataevo cemeteries and correlate it with the lower horizon of the fifth layer of Razdorskoe.

We can also compare the vessel from the burial 31 in kurgan 9 of Tuzluki with the pottery of this horizon of Razdorskoe and the third layer of Strilcha Skelja (fig.122: 2, 11). The burials of Koisug, Krasnogorovka, Mukhin 1, Moskva 1 and Tuzluki (burials 27, 28, 30 in kurgan 9), where flint blades were found, but adornments of the oldest types were absent, are also synchronous to them.

It is difficult to determine an age of burial in Donetsk. We can only suggest, that it synchronizes with the forth or lower horizon of the fifth layer of Razdorskoe.

It seems that burial 7 in kurgan 5 of Mukhin 2 and burial near khutor Semenkin, as well as Mokry Chaltyr are the youngest among kurgan burials of the eastern variant of Sredniy Stog culture. The vessel from the Mokry Chaltyr with high neck is similar to the pots of the upper horizon of the fifth layer of Razdorskoe and in addition to it this burial was accompanied with flakes, which are dominated in the same stratum of Razdorskoe.

The pots from burial 7 in kurgan 5 of Mukhin 2 and burial near khutor Semenkin with comb ornamentation and high necks are similar to the pottery from the upper horizon of the fifth layer of Razdorskoe and to the ceramics from the Sredniy Stog type settlements of the western variant (fig.122: 5-7, 13-16). The younger age of all these burials is testified by the presence of flint flakes among their grave goods. V.J.Kijashko noted, that there was some re-orientation from making tools on blades to the use flakes during the transition from the fourth layer of the Razdorskoe settlement to its fifth layer (Кияшко 1994). All these facts compel us to synchronize above mentioned burials with the upper horizon of the fifth layer of the Razdorskoe settlement.

The authors of publication compared the vessels from the burial 7 in kurgan 5 of Mukhin 2 with the pottery of the lower layer of Liventsovka 1 and with the Tripolye B II (Нечитайло, Козюменко, Жеребилов 1998, с.68). Then A.L.Nechitailo proposed to distinguish a new Liventsovka culture, which is unified the first layer of Liventsovka, burial 7 in kurgan 5 of Mukhin, burial 11 in kurgan 1 of Krasnogorovka, burials 26, 30, 31 in kurgan 9 of Tuzluki (Нечитайло 2002). I should note, that the first layer of Liventsovka includes materials of the Neolithic Lower Don culture and the second layer belongs to the Late Eneolithic Konstantinovka culture (Кияшко 1994, с.25). The vessels from the

burial 7 of Mukhin 2 are quite different from the ceramics of Konstantinovka culture.

4.2.2. PERIODIZATION OF MONUMENTS OF EASTERN VARIANT

Considering all above mentioned facts, it is possible to suggest the periodization, which has based, mainly, on the stratigraphy of the Razdorskoe settlement, where three successive layers of the Sredniy Stog culture were traced. These layers represent three periods of development of the eastern variant, which are correlated with other settlements and burials.

Three sites with similar ceramics (the fourth layer of Razdorskoe, Tzimlanskoe and the Sredniy Stog layer from trench V of Razdolnoe) were the oldest ones, related to the **first period**. They are combined with the burials of Mariupol and Karataevo cemeteries and kurgan burials near staniza Staronizhesteblievskaya.

The first period is, mainly, synchronous with the Tripolye A (PreCucuteni II – Cucuteni A 1-2). It is dated about 5300-4800 BC. Vessels with linear, strokes and rarely comb ornamentation, with short necks, which sometimes have collars, as well as tools on blades and adornments, similar to the adornments of the Neolithic Lower Don culture (plate-braids from boar fangs, pendants from red deer teeth, round bone beads and nacre beads) are typical for this period.

The **second period** is represented with materials of lower horizon of the fifth layer of Razdorskoe. Ground burials near Bessergenovska, burial 4 of Liventsovka, Donetsk, Alexandrovsk, Dzhurdzhuleshty, Yama, Lugansk, Chongrad as well as burials 14, 15, 17, 20 from kurgan 3 of Baturinskaja, burial 11 of Verkhniy Akbash, burial 15 in kurgan 1 of Veselaja Roscha and, perhaps, burial 3, kurgan 24 of Veselaja Roscha III, burial 6 of Moskva 1, burial 6 in kurgan 3 of Mukhin 1, burials 9 and 30 in kurgan 5 of Mukhin 2, burials 27 and 33 in kurgan 5 of Koisug, burial 9 in kurgan 7 and burial 18 in kurgan 2 of Komarovo, burials 8 and 7 in kurgan 5 of Krasnogorovka, burials 27, 28, 30, 31 in kurgan 9 near Tuzluki, khutors Popov and burial 4 in kurgan 1 of Suvorovskaya could be related to it, too.

The monuments of the second period are synchronous with the end of Tripolye A and Tripolye B I (about 5900-5450/5400 BC). Significant changes are not fixed in ceramic complex. Flint blades are present in grave goods, but tools on flakes dominate in the settlement materials. Among adornments the plate-braids are absent, but bone and stone beads are known. The nacre beads, especially small size, and copper adornments are numerous.

The **third period** includes the upper horizon of the fifth layer of Razdorskoe, Samsonovka, Alexandria, Serebrjanskoe, Chernikovo Ozero 1 and three burials (burial 7 in kurgan 5 of Mukhin 2, burial 6 in kurgan 2 of Mokry Chaltyr and khutor Semenkin). These monuments are synchronous with Tripolye B I-II and dated about 4450/4400-4200 BC. Vessels with the high necks, linear, strokes and comb ornamentation, as well as tools on the flakes are typical for them.

4.2.3. CHRONOLOGY OF MONUMENTS OF WESTERN VARIANT

Analysis of stratigraphy has shown, that materials of the third layer of Strilcha Skelja type overlapped layers of the second period of Azov-Dnieper culture in the western Azov Sea area at Semenovka and Kamennaja Mogila 1. In the steppe Dnieper basin the third layer of the Strilcha Skelja site also overlapped the layer of Azov-Dnieper culture and, in its turn, lay under the layer with materials, which are identical to the second layer of the Sredniy Stog site. These facts have defined the chronological position of the materials of the

third layer of Strilcha Skelja type between the monuments of the second period of Azov-Dnieper culture and the settlements of the second layer of Sredniy Stog type.

The materials of the third layer of Strilcha Skelja type were dated at the Semenovka I, Kamennaja Mogila I and Strilcha Skelja sites (Table 14). Judging from them, the settlements of this type existed in the steppe Dnieper basin and western Azov Sea area about 4550-4350 BC. The dating of preceding monuments of the second period of Azov-Dnieper culture (5200-4750 BC, Table 16) and their sinchronozation with Tripolye A (Kotova 2003) also does not contradict it.

Table 16. Radiocarbon data of the second period of Asov-Dnieper culture

Monuments and materials	Lab. Index	BP	calBC Weninger 2005	
Semenovka, trench 2, square 3, depth 110-120 cm, second layer, animal bone	Ki-7675	6360±70	5351±79	Котова, 2002
Kamennaya Mogila 1 settlement, layer of second period of Azov-Dnieper culture, animal bone	Ki-4025	6376±60	5374±61	Телегин, 1990
Kamennaya Mogila 1 settlement, layer of second period of Azov-Dnieper culture, animal bone	Ki-4023	6120±80	5057±127	Telegin et al, 2000
Kamennaya Mogila 1 settlement, layer of second period of Azov-Dnieper culture, animal bone	Ki-4024	6180±90	5118±121	Telegin et al, 2000
Strilcha Skelya, square 8, horizon 9, №509, second layer, animal bone	Ki-8174	6200±65	5153±90	Котова, 2002
Yasinovatskiy 1 cemetery, grave 45, human bone	OxA-6164	6360±75	5346±82	Telegin et al, 2000
Yasinovatskiy 1 cemetery, grave 45, human bone	Ki-6791	6305±80	5248±109	Telegin et al, 2000
Yasinovatskiy 1 cemetery, grave 36, human bone	OxA-5057	6260±80	5197±104	Telegin et al, 2000
Yasinovatskiy 1 cemetery, grave 34, human bone	Ki-6786	6195±80	5139±108	Telegin et al, 2000
Nikolskiy cemetery, grave 125, human bone	OxA-5029	6300±80	5241±110	Telegin et al, 2000
Nikolskiy cemetery, grave 94, human bone	OxA-6226	6220±75	5167±98	Telegin et al, 2000
Nikolskiy cemetery, grave 137, human bone	OxA-5052	6145±70	5088±109	Telegin et al, 2000
Dereivka 1 cemetery, grave 11, human bone	Ki-6728	6145±55	5094±96	Telegin et al, 2000
Dereivka 1 cemetery, grave 33, human bone	OxA-6162	6175±60	5126±89	Lillie, 1998
Dereivka 1 cemetery, grave 49, human bone	OxA-6160	6165±55	5116±88	Telegin et al, 2000
Lysaya Gora cemetery, pit 4, human bone	Ki-8181	5890±70	4749±81	Котова, 2002

The age of the Sredniy Stog culture is also testified by its synchronization with the Tripolye culture. All authors, who wrote about steppe influence, soundly compared Tripolye B I coarse ceramics with shell admixture with the pottery of the Strilcha Skelja. This type of Tripolye ceramics was ornamented with lines, strokes, sometimes comb imprints, using a framing of

arcuated or triangular compositions with strokes. Really this coarse pottery is very similar to the ceramics of the third layer of Strilcha Skelja. It was found at the Novye Ruseshty settlement (Tripolye B I-Cucuteni A 3), the Zhury and Vasilevka I settlements (Tripolye B I-Cucuteni A 4) in the Dniester basin, Beresovskaya HPS and Sabatinovka I (Tripolye B I-Cucuteni A 3) in the South Bug basin and Krasnostavka (Tripolye B I-Cucuteni A 4) in the Dnieper-South Bug interfluve (fig. 126).

Pots with neck height about 5 cm were distributed in the end of B I stage of the Tripolye culture among coarse ceramics (fig.126: 2, 3). The most numerous collection of such pottery has been found at the Soloncheny 2 site in the Dniester basin (the end of B I – the beginning of B I-II stage). Coarse ceramics with the shell admixture, round bottom, comb and strokes-linear ornamentation were found at this settlement. Namely this pottery, especially with round bottom, is the most similar to the steppe vessels and testifies the immediate influence of the Early Sredniy Stog population (fig.128, 129), because the pots with high neck are also typical for the third layers of Strilcha Skelja and Semenovka I.

On the basis of the dates obtained for the Sredniy Stog culture sites and monuments of the second period of Azov-Dnieper culture (Table 16), as well as on basis of the synchronization with Tripolye culture (Table 15), it is possible to define the age of the settlements of the third layer of Strilcha Skelja type about 4700-4350/4300 BC. Those settlements of western variant are synchronized with the monuments of the second period of eastern variant of the Sredniy Stog culture.

The stratigraphy of Strilcha Skelja shows younger age of the sites of the second layer of Sredniy Stog type (eponymous settlement, the fourth layer of Strilcha Skelja, Kodachek, etc.). A radiocarbon date for animal bone from the fourth layer of Strilcha Skelja was made (Table 14). It defines the age of these monuments about 4400-4230 BC.

The similarity of ceramics of the second layer of Sredniy Stog type with the coarse pottery of Tripolye B I-II helps in specification of the their age. For example, settlements of Tripolye B I-II (Kadievtsy, Vesely Kut, Shkarovka, Veremje, etc), which are younger, than Soloncheny 2, had coarse ceramics with pearls on the upper edge of neck and ornamentation, which consisted of the imprints of long comb stamp and drawn lines (fig.127). The interweaved cord decoration, including short imprints – so called “caterpillar” - appeared on Tripolye pottery in the end of the period B I-II (fig.127: 4). High neck of vessels and comb ornamentation unify this ceramics with the pottery of the sites the second layer of Sredniy Stog type. Individual vessels from the settlement Veselyi Kut are very similar in ornamentation and form to the ceramics of Sredniy Stog. The question of distribution of the interweaved cord ornamentation was already analyzed (Цвек, Рассамакин 2002). E.V.Tsvek and Y.Y.Rassamakin listed the monuments of Cucuteni A-B 2 and Tripolye B I-II (Zaleshiki, Tsvijin), where the ornamentation of the interweaved and simple cord was fixed.

Materials of the Miropolje settlement (the beginning of Tripolye B II stage), where pottery similar to the steppe monuments was found (Цвек, Рассамакин 2002, fig.10; 11), assisted in determination of the upper chronological border of sites the second layer of Sredniy Stog type. E.V.Tsvek and G.J.Rassamakin consider two vessels with shell admixture and the interweaved cord imprints as imported ceramics from the sites of the second layer of Sredniy Stog type. Three vessels made of clay with shell and sand inclusions and horizontal comb prints are considered as the Tripolye vessels, which were manufactured under the steppe influence. Ceramics with interweaved cord ornamentation is really similar to the pottery of the fourth layer of Strilcha Skelja and Sredniy Stog. But the similar pots are also known at the younger Dereivka site of the Dereivka Middle Eneolithic culture. Comb imprints of the middle size stamp, which formed horizontal lines, are identical to the Dereivka ornamentation. In addition, flat bottoms were widespread in the sites of

Dereivka, not the Sredniy Stog culture of the Dnieper basin. These facts forced to consider the appearance of pottery with the steppe influence on the Miropolje settlement as a result of the Dereivka culture influence.

Basing on the imported ceramics in Miropolje, E.V.Tsvek and G.J.Rassamakin synchronize monuments of the second layer of Sredniy Stog type with the Tripolye B II and the beginning of C I (Цвек, Рассамакин 2001-2002, c.243). But the pottery, which is similar to the ceramics of the second layer of Sredniy Stog type, is absent at the settlements of Tripolye B II or Tripolye C I. This evidence allow me to suggest, that the sites of the second layer of Sredniy Stog type coexisted only with Tripolye B I-II and, probably, with the beginning of Tripolye B II.

Radiocarbon dates were made for the Tripolye B I-II and B II settlements (Table 15). Taking them into account, it is possible to date sites of the second layer of Sredniy Stog type about 4350/4300-4200 BC. These settlements are synchronous to the third period of the eastern variant of the Sredniy Stog culture.

Analyzing chronology of the ground burials, I should note, that the radiocarbon dates were made only for three skeletons from the Krivoy Rog, Igren and Chapli cemeteries (Table 14). Burial 3 of Krivoy Rog, which is dating about 5000 BC, was the oldest.

The Chapli cemetery was obviously younger. According to the radiocarbon date for burial 2a, its age is defined about 4800-4560 BC (Table 14).

Perhaps, the burials of Novodanilovka belonged to the same period of time. One of them was accompanied with the imported vessel of the Meshoko-Zamok type from Northern Caucasus. The sites of the Meshoko-Zamok type were synchronized with Tripolye B I and B I-II by S.N.Korenevskiy on the basis of bone “clasps” and blades from boar fangs (Кореневский 1998, c.106). But, as I.V.Manzura noted (Манзура 2000), “clasps” in Tripolye were found only at the settlements Tripolye A2 (PreCucuteni III) – Tripolye B I (Cucuteni A3). Therefore the synchronization of the Zamok and Svobodnoe sites with Tripolye B I is be the most possible. The burials of Novodanilovka are also dated this time.

Perhaps, some burials from Petro-Svistunovo accompanied with the metal tools, which N.V.Ryndina relates to the metalworking of the Tripolye A and B I (Рындина 1998, c.191), were synchronous with the Chapli cemetery. The adornments from boar fangs from Petro-Svistunovo find some analogies in the Giurgiulesti cemetery, which has the radiocarbon date. According these facts, the age of the preserved burials of Petro-Svistunovo could be defined about 4800-4300 BC.

The Niznyi Rogachik burial, which did not contain metal tools, as well as finds, which could indicate its younger age, probably, belongs to the same period of time.

The burial in Bulgaria near village Reka Devna was related by H.Todorova (1987) and N.V.Ryndina (Рындина 1998, c.53) to the beginning of the transitional period from the Eneolithic to the Early Bronze, which was synchronous with the period of Tripolye B I-II. At the same time the inventory and analysis of the metal tools made by N.V.Ryndina (Рындина 1998, c.109-113) show their similarity with the materials of preceding period and allows to correlate this burial with the Tripolye B I.

The burials of Kulevcha, Kasimcha and Lyngoch can be dated about 4800-4350/4300 BC. They had no younger types of grave goods, and their location on the Black Sea coast shows, that they were made during period of the close contacts between steppe inhabitances and population of Gumelnitza and Varna cultures in a peak of development of Thrace-Lower Danube center of Balkan-Carpathian metallurgical province before 4300 BC.

The age of the Decea Muresului cemetery is determined with the vessels of the Tisapolgar culture in the grave goods and radiocarbon date for the burial 12 (Tabl.14). The Tisapolgar culture is synchronous with the Tripolye B I (Videiko

2000) and Cucuteni A 1, A 2 in Romania (Mantu 1998). On the base of these facts the age of the Decea Muresului cemetery can be defined about 4600-4300 BC. However it should be noted, that the radiocarbon date for the burial 12 looks like younger than the radiocarbon dates for the Cucuteni A 1, A 2 settlements (Mantu 1998) with which the Tisapolgar culture is synchronized.

The chronology of the Igren cemetery is most complicated. Radiocarbon date for the burial 15 shows (Table 15), that, perhaps, some of its burials are synchronous to the beginning of Tripolye B I and could be dated for about 4700-4350/4300 BC. But the fact, that a vessel from the burial 1 (1930s) is similar to the ceramics of the Sredniy Stog site, gives me a possibility to suggest longer existence of this cemetery. It means, that the Sredniy Stog population made burials on the territory of this cemetery in different times from 4700 to 4250 BC.

The burials near village Falciu in Romania belong to the youngest monuments. Copper hammer of the Shiria type was found in their inventory. Such tools are common for the Bodrogkerestur culture, the beginning of which is synchronous to the Tripolye B I-II (Рындина 1998, c.66, 111).

Kurgan burials of the western variant can be synchronized with the Tripolye B I and B I-II. Radiocarbon date was made only for skeleton of the Kainary burial, which was accompanied with the pot of the Tripolye B I period (Tabl.14). On the base of this date and taking into account the dates for settlements of Tripolye B I, the age of this burial is defined as 4450-4380 BC.

The age of the burial in Suvorovo with awls, which are similar to the tools of the end of stage A and B I of the Tripolye culture, was the same (Рындина 1998). The burial was surrounded with the stone cromlech. Such structures were uncommon for the burials of the Early Eneolithic, but they were widely used in the funeral ritual of the Middle and Late Eneolithic population of steppe. Therefore I can’t date the burial from Suvorovo older, than Tripolye B I.

Perhaps, the Gonova Mogila burials with long obsidian blade and copper beads, similar to the finds from the Sredniy Stog cemeteries with age about 4450-4380 BC, is synchronous to these monuments.

Apparently, the burials in the kurgan near village Kut with nacre beads and a large flint blade had a similar date.

Perhaps, the burial near village Vinogradnoe in the western Azov Sea area is synchronous with the Tripolye B I-II. It was made in kurgan and accompanied with the short flint blade, which is not typical for the old burials.

4.2.4. PERIODIZATION OF MONUMENTS OF WESTERN VARIANT

The stratigraphy of settlements, radiocarbon dates and synchronization with the Tripolye culture let me to distinguish several periods in the development of western variant of the Sredniy Stog culture.

The burials of Krivoy Rog were related to the first period. The radiocarbon dates for this cemetery reveal, that population of the Sredniy Stog culture lived in the Dnieper basin about 5100-4900 BC. Meanwhile settlements of this time are not known in the western Azov Sea area and steppe Dnieper basin. Perhaps, small groups of the Sredniy Stog population only began to settle on this territory, co-existing with local inhabitants – bearers of the second period of Azov-Dnieper culture.

Materials of the upper layer of Semenovka, the third ceramic layer of Kamennaja Mogila 1, the third layer of Strilcha Skelja, island Kizlevy, some materials of Vinogradnyi Island, the Chapli, Petro-Svistunovo and Novodanilovka cemeteries, burial 15 and probably some other burials of the Igren cemetery and

kurgan burials near villages Kut and Niznyi Rogachik are belonged to the second period. The Sredniy Stog population of this period left some burials outside the main territory: the ground burials of Decea Muresului, Reka Devna, Kulevcha, Lugoch and kurgan burials of Suvorovo, Kainary and Gonova Mogila.

All these monuments are synchronous, mainly, with the Tripolye B I, and this fact is testified with the radiocarbon dates for Semenovka, Strilcha Skelja, Kamennaja Mogila I, Igren and Chapli (Table 14). The age of the second period is determined about 4800-4350/4300 BC on the basis of dates and synchronization with the Tripolye culture.

The **third period** includes such monuments as Kodachek, the second layer of Sredniy Stog, the fourth layer of Strilcha Skelja, some materials of Zolotaja Balka, Sobachki, the burial near village Vinogradnoe, burial 1 and probably some other burials of the Igren and Falciu cemeteries. These monuments are synchronized with the Tripolye B I-II on the basis of ceramic analogies and radiocarbon date for forth layer of Strilcha Skelja (Table 14). The age of the western variant of the Sredniy Stog culture is defined more exactly with help of radiocarbon dates for following Dereivka culture.

Table 17. Synchronization of the Early Eneolithic cultures of the south of Eastern Europe

<table>
<tr><th>BC</th><th>Caspian Sea area</th><th colspan="2">Steppe Volga basin</th><th colspan="2">South of the modern forest-steppe Volga basin</th><th>Don-Kalmius interfluve, Seversky Donets basin</th><th colspan="2">Dnieper-Kalmius interfluve</th><th>Forest-steppe between the Dniester and Dnieper</th></tr>
<tr><td>4100
4250</td><td rowspan="8">Khvalynsk culture</td><td rowspan="6">Khvalynsk culture</td><td></td><td rowspan="8">Khvalynsk culture</td><td rowspan="8">Samara culture (2 period)</td><td>Dereivka culture, the beginning of the Konstsntinovka culture</td><td colspan="2">Dereivka culture and sites of the Lower Mikhajlovka type</td><td>Tripolye B II</td></tr>
<tr><td>4350</td><td></td><td>Sredniy Stog culture, eastern variant, (3 period)</td><td colspan="2">Sredniy Stog culture, western variant, (3 period)</td><td>Tripolye B I-II</td></tr>
<tr><td>4400
4500</td><td></td><td rowspan="3">Sredniy Stog culture, eastern variant, (2 period)</td><td colspan="2" rowspan="3">Sredniy Stog culture, western variant, (2 period)</td><td rowspan="2">Tripolye B I</td></tr>
<tr><td>4600</td><td></td></tr>
<tr><td>4700</td><td rowspan="5">Tripolye A</td></tr>
<tr><td>4800</td><td></td><td rowspan="3">Sredniy Stog culture, eastern variant, (1 period)</td><td>Sredniy Stog culture, western variant, (1 period)</td><td>Azov-Dnieper culture, (2 period)</td></tr>
<tr><td>4900</td><td></td></tr>
<tr><td>5100</td><td>Pricaspian and Orlovka cultures</td><td>Khvalynsk culture</td><td colspan="2" rowspan="2">Azov-Dnieper culture, (period 1б) and Surskaja culture</td></tr>
<tr><td>5100</td><td rowspan="3">Khvalynsk culture</td><td rowspan="3">Pricaspian culture</td><td rowspan="3">Orlovka culture</td><td rowspan="3">Samara culture (1 period)</td><td rowspan="3">Lower Don and Surskaja cultures</td></tr>
<tr><td>5200</td></tr>
<tr><td>5100</td></tr>
<tr><td>5450</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table>

Judging by dates for Dereivka settlement and cemetery (Телегин, Нечитайло, Потехина, Панченко 2001), this culture formed in the south of modern forest-steppe zone about 4300 BC. A radiocarbon date for burial 13 of the Igren

cemetery with dish identical to the Dereivka pottery indicates, that population of the Dereivka culture appeared on the north of the steppe zone about 4250 BC. This date together with a radiocarbon date for the Bugaevo site in south of steppe (4250 BC) shows, that the end of western variant of the Sredniy Stog culture in the steppe zone took place about 4250 BC.

All these facts determine the age of monuments of the third period of western variant of the Sredniy Stog culture about 4350/4300-4250 BC. The third period was rather short – about 100 years. But stratigraphical observations, made by A.V.Dobrovolskiy on the Sredniy Stog settlement (Добровольський 1929), allow me to suggest, that there were two stages in the development of the third period. The pottery with comb or sometimes strokes ornamentation is typical for the first of them and the pottery with imprints comb and interweaved cord is characteristic for the second stage. Unfortunately, the monuments of the third period are not numerous, and these observations have not testified with materials of other sites.

Thus, analysis of archaeological evidence has shown, that the Sredniy Stog culture consists of two variants: western and eastern. On the basis of the stratigraphy, radiocarbon dates and synchronization with the Tripolye culture the Sredniy Stog culture is divided into three periods. The monuments of the first period of eastern variant are the oldest (5300-4800 BC). The western variant formed later. It’s first period is dated about 5100-4800 BC. The sites of the second period of both variants are synchronous, and their age is about 4800-4350/4300 BC. The third period of eastern variant is dated 4350/4300-4250 BC. It is possible, that the monuments of western variant existed longer, from 4350/4300 to 4200 BC.

CHAPTER 5. MATERIAL CULTURE AND FUNERAL RITE

Periodization and chronology, which were discussed earlier, allow me to analyze the evolution of traditions of the Sredny Stog culture within the limits of its two variants. But, first of all, I should consider features, which were typical for all monuments and allow me to relate them to one culture. The main of these features is embodied by ceramics, which was made of clay with pounded shell admixture. Nowadays it is represented only with the profiled pots, which had point and rare rounded or flat bottoms. Their necks were short in size (up to 5 cm). Drawn lines, strokes and combinations of these elements dominated in the decoration of these vessels, but sometimes, comb stamps was also used. The upper third of vessels and rims were decorated.

Flint complex of Sredniy Stog culture is characterized by the use of blades, which were made with the help of knapping of directional or bidirectional cores of circular and unilateral chipping. Large, medium and microlithic blades, often without secondary treatment were used. Besides blades, end scrapers and end-side scrapers are the most numerous among tools with the secondary treatment. Bifacial spear, dart and arrow heads were made on flakes.

The ground and kurgan burials are typical for the funeral rite of Sredniy Stog culture, as well as the variety of burial constructions, among which simple pits dominated. Sometimes stone tombs and pits with the alcoves were used. We also know examples of cremation and inhumation. The last included skeletons, which lay flexed on the back, sometimes flexed on the side or stretched out on the back or sitting. The majority of them was painted with the ochre.

5.1. EASTERN VARIANT OF THE SREDNIY STOG CULTURE

5.1.1. MATERIAL CULTURE

For this moment I can’t give differentiated characteristics for all three periods of eastern variant, because of the absence of full publications of the Razdorskoe 1 settlement and small excavated area at the Razdolnoe settlement. Therefore I have offered only general description of the different categories of wares with some tendencies and specificity of them, which was typical for separate periods.

Ceramics

Pottery of eastern variant of the Sredniy Stog culture was made of clay with pounded shell admixture (fig. 131). Inner surface of vessels often was smoothed in the horizontal direction with the help of comb stamp, while sometimes it was stayed plain, without hatching. Rare hatching was made on the outer surface, too.

The vessels had point, rare rounded or flat bottoms. Maximum diameter of pot body was in the middle part of it. Height of necks varied from 0,5 to 5 cm. The majority of vessels had outturned neck with the sharp transition from neck to shoulder, while the diameter of rim was not larger than the diameter of body. Usually rim was straight. But some vessels with oblique inward rim are known (fig.131: 17). In spite of general features, I can trace some specificity of vessel forms for each stage. For example, pots of the first and the second periods had necks, which height was not more, than 3 cm (fig.131: 8-19). Some of those vessels had a collar on the neck (fig.131: 19). The considerable part of pottery of the third stage had neck, which height was 4-5 cm (fig.131: 1-7).

Drawn lines dominated in the ornamentation of vessels. They were supplied with the strokes, hollows and comb imprints, which usually used for division of

areas or for framing of linear ornamentation. We also can distinguish group of pottery decorated with imprints of long comb prints, which formed horizontal lines and geometrical compositions (fig.37: 1-3). Imprints of “stepping” comb are known for the first period (fig.131: 18). They disappeared later, while not numerous vessels decorated with imprints of interweaved cord or pearls appeared (fig.131: 10, 11).

Ornament was made on upper half of vessels and rim, sometimes – on the whole surface (fig.131: 7, 9). Horizontal zoning dominated in the ornamental compositions, “parquet” patterns were also widely distributed, while hanging figures were not numerous and represented only by triangles.

Tools

The majority of tools were made from flint blades during the first period. Tools on flakes are the most typical for the second and the third period. Population used, mostly, high-quality flint pebble, which had gray-brown color and a good clarity. It was presumably mined in the Severskiy Donets basin.

Directional and bidirectional **cores** of rounded or unilateral chipping are known for the monuments of the first and second periods (fig.132). First of all, large blades (with a width more, than 2,4 cm), than, according to the abrasion of core, middle and microlithic blades (with a width lesser, than 1 cm) were chipped. Now we have not known any large cores, which could be used for the chipping of very long blades, found in burials. We can’t exclude, that they were made on the place of flint mining in the Severskiy Donets basin.

It is possible to consider the burial of man from Alexandrovsk (kurgan 1, burial 46) as the burial of craftsman, who specialized in the flint tool production. It was accompanied with two pebbles, which could be used as percussors (fig.48: 15, 16); horn rods, which could be used as fabricators or mediators; and numerous flint artifacts. They demonstrate different kinds of flint wears, which were made by this craftsman. Judging by the finds, he knapped flint, making large, medium and microlithic blades, scrapers on flakes and blades of different size, using different types of retouch.

Blades were among the main semi-finished product for making tools during the first and, presumably, the second periods of the eastern variant. The blades were used without secondary handling and blades with a retouch (fig. 133: 1-14). Retouch was made from the dorsal side, sometimes both from the dorsal and ventral sides (fig.133: 5). We have also known blades with the opposite retouch: on the one part it was on the ventral side and on the opposite part it situated on the dorsal side. Laminar retouch, which was not known in the Neolithic monuments of this region, distributed during the first period of the Sredniy Stog culture. It is supposed, that it was made with the help of copper retouchers (Скакун, Самзун, Матева 2004).

Unfortunately, I can’t describe cores and blades of the third period because of the unpublished materials of Razdorskoe I settlement and mixed layers of sites in the Severskiy Donets basin. But, according to V.Y.Kijashko, there were only a few blades in the layer 5a of Razdorskoe, which represented the materials of the third period. They were replaced with flakes.

There are many **scrapers** on flakes and blades. End scrapers were made on blades sometimes with a retouch on sides (fig.134: 3-9). Rarely we found double end scrapers (fig.134: 13). While scrapers on the long blades are known in burials, there are many scrapers on shortened blades at settlements. I can’t exclude, that some of them were the result of re-using of broken scrapers on the long blades.

Scrapers of different forms were made on flakes: side (fig.134: 1, 8), end-side (fig.134: 2), end (fig.134: 14), circular and oval with a retouch on 1/2 of 2/3 of perimeter (fig.134: 3, 10, 15).

Borers on blades are known for the first period, too (fig.135: 1, 2).

Flint **flakes** with and without retouch were used as the tools (fig.68: 4).

Tools for woodworking represent one of the most important categories of tools of eastern variant of the Sredniy Stog culture. They include axes from flint and soft stone (fig.136: 1-11). Only one trapeziform flint axe with one-side retouch and polishing is known for the first period (fig.136: 1). Tools for woodworking are more numerous at the monuments of the second period: bifacial flint axe, which shape was similar to the triangle (fig.136: 2), and axes from soft stone of different forms: trapeziform axes from Giurgiulesti; triangular axes from Yama, Lugansk and Komarovo; elongated triangular axe from Yama (fig.136: 3-9). Triangular and trapeziform axes from the fifth layer of Razdorskoe belong to the second or the third periods (fig.136: 10, 11).

It is interesting, that we can trace the same regularities in the variation of size of the woodworking tools from settlements and burials, as in the case of flint tools: large axes were found in the burials, while small axes – at the settlements. Perhaps, axes were also re-used on the sites, while new tools put into the burials.

Copper tools are not numerous. They are represented with awls with rhombic, square and circular sections in the monuments of the second period (fig.135: 3-7).

Bone objects are known only at the monuments of the first and the second periods. A bone hammer from the Razdorskoe settlement and a percoir from the burial near staniza Staronizhesteblievskaja are the oldest (fig.137: 3, 4). Bone tubules (Razdorskoe, Lugansk, fig.137: 7, 8), bone and horn rods, some of which could be used as the mediators or fabricators during chipping of flint (Komarovo, Alexandrovsk, fig.137: 10-13) were found at the monuments of the second period.

Weapons

Western variant weapon of the Sredniy Stog culture represents with stone mace and numerous arrow, spear and dart heads. Bifacial triangular points with the straight, slightly concaved or bulging basement dominate among them (fig. 138). A leaf point is known only for the first period (fig. 138:2).

A few bone points have been found in the Giurgiulesti cemetery (the second period). Two darts with bone heads were accompanied the burial 4 (fig.138: 6, 7). One of them has got wooden shaft decorated with gold plates and length 40 cm. It was named “horn scepter” (Haheu, Kursiatov 1993). Allowing for ceremonial meaning of this thing, I think it could be used as dart, because a similar dart point made of horn, but without gold plates was found in the Middle Eneolithic Kapulovka cemetery (Шапошникова, Бодянський 1970).

A weapon with composite head (length 50 cm) was discovered in the burial 4, too. Its peak was made of red deer horn connected with wooden part. The last contained two long grooves with 28 flint deserts and two bone plates, which served as handle (fig.138: 4). Accordingly to V.I.Klochko, it belonged to cut-and-thrust weaponry with long handle (Klochko 2001, p.63). But possible it was a sword with a short bone handle.

A copper “stiletto” from the above mentioned grave of the Giurgiulesti cemetery can be interpreted as a dagger (34,8 cm) with handle, which is round in section, and blade, which is square in section (fig.138: 6).

A stone mace from the burial XXIV of the Mariupol cemetery could be interpreted as a weapon, too (fig.141: 1).

Flint blades can be used as tool and weapon at the same time. It is possible to consider intact long and middle blades, which were found in skeleton hands or near they, as knifes. The blades occupied that position in Karataevo and burial 21 of Mariupol cemetery (the first period), in the burials 10, 11 in kurgan 10 of Alexandrovsk, Verhniy Akbash, burial 18 in kurgan 2 of Komarovo, burial 8 in kurgan 5 of Krasnostavka, burial 2 in kurgan 1 of Lugansk, burial 6 in Moskva, burial 9 in kurgan 5 of Mukhin 2 (the second period).

Adornments and details of clothes

The population of eastern variant of the Sredniy Stog culture used numerous adornments (fig.140). Now I can characterize only those, which were used during the first and the second periods. There is no data about adornments of the third period because of the singleness of burials of that time.

For **first period** I have known different beads, pendants, plates-braids and bracelets.

Beads were made of bone, nacre, stone and copper.

Bone beads are represented with the two types: circular (fig.140: 9, 10) and cylindrical (fig.140: 4).

1. Cylindrical beads from cortical bones were found in the Karataevo and Staronizhesteblievskaja burials as well as in the fourth layer of Razdorskoe settlement.

2. Circular beads were discovered in the grave XXIV of Mariupol cemetery and Staronizhesteblievskaja burials.

Numerous **nacre flat beads** have included two forms: small circular beads and circular beads with the cut segment.

1. Small beads of circular form were found in the Mariupol and Staronizhesteblievskaja burials (fig.140: 1).

2. Circular beads with the cut segment were only in the Mariupol cemetery (fig.140: 2).

We have also known **stone beads** from jet and limestone from the Staronizhesteblievskaja burials. They had flat and cylindrical forms (fig.140: 13-15).

There are only a few ring-like **copper beads** in the Mariupol cemetery (fig.140: 16). According to N.V.Ryndina, they are similar to gold beads of the Varna cemetery in Bulgaria (Рындина 1998).

Pendants from animal teeth and their imitations, as like as the stone pendants, also were used for the decoration of clothes.

1. Pendants from deer teeth decorated clothes in the Staronizhesteblievskaja burials. Teardrop-shaped pendants, which were similar to the deer teeth, originated from the Staronizhesteblievskaja and Karataevo cemeteries (fig.140: 3).

2. Teeth of marmot were found in the burial XXIV of Mariupol cemetery.

3. Stone flat pendant of circular form accompanied the burial in Grozny (fig.140: 19).

Plates-braids of six types were also used for the decoration of clothes during the first period:

1. Quadrangular plates from bone or nacre with two holes for fixing were found in the fourth layer of Razdorskoe settlement (fig.140: 5).

2. Quadrangular plates with four holes for fixing on the clothes and notches decorated clothes in the Staronizhesteblievskaja burials (fig.140: 6).

3. Quadrangular plates with transverse grooves on the narrow sides for fixing on the clothes were discovered in the Mariupol and Staronizhesteblievskaja burials. They were ornamented with short notches partly or entirely on perimeter (fig.140: 7).

4. Quadrangular plates with hollows for fixing on the clothes and notches were found in the Staronizhesteblievskaja burials (fig.140: 8).

5. Quadrangular plates with hollows for fixing from one side and transverse grooves from the other side from the Staronizhesteblievskaja burials were decorated with notches (fig.140: 11).

6. Elongated triangle plates with a hole in a corner and transverse groove from the contrary side from the Staronizhesteblievskaja burials were ornamented with notches, too (fig.140: 12).

Copper bracelets of two types were found only in one burial of the Mariupol cemetery.

1. Spiral bracelet from circular wire (fig.140: 18).

2. Ring-shaped bracelet from circular wire (fig.140: 17).

Adornments of **the second period** are more diverse.

Beads from bone, stone, nacre and copper were widely used as in earlier times.

Bone beads are represented with the two types:

1. Flat ring-shaped beads from the burial 28 in kurgan 9 of Tuzluki.

2. Cylindrical beads from cortical bone, which were found in the burial near khutor Popov and Alexandrovsk cemetery (burial 9 in kurgan 1). Sometimes cylindrical beads had grooves (fig.140: 22, 23).

Numerous **nacre beads** are also represented with the two types:

1. Flat circular beads, which are distinguished by their size (fig.140: 27, 28): big (maximum diameter more than 2 cm), medium (diameter from 1 to 2 cm) and small (diameter less than 1 cm). They were found together in burial 55 in kurgan 1 of Alexandrovsk and burial 9 in kurgan 5 of Mukhin 2. The small beads decorated clothes in the burial near khutor Popov, burial 5 of Bessergenovskaja, burial 2 of Giurgiulesti and Chongrad.

2. Cylindrical beads from the *Dentalium* were found in the burial 55 in kurgan 1 of Alexandrovsk (fig.140: 29) and, perhaps, in the burial 4 of Giurgiulesti.

Stone beads were made of sandstone and represented by the flat or cylindrical forms (fig.140: 20, 21). They accompanied burial in Chongrad and burials 1, 2, 3 and 4 of the Giurgiulesti cemetery.

Copper beads are more frequent in the burials of the second period, than in the earlier times. They are represented with the two types:

1. Ring-shaped beads were made of metal strips (fig.140: 33). Their size varies from 2 to 10 mm, width – from 2 to 5 mm, thickness – from 1 to 3 mm. They were found in the burial 55, kurgan 1 of Alexandrovsk; burial 9, kurgan 5 of Mukhin 2; burials 1, 2, 3 and 4 of Giurgiulesti cemetery and in Chongrad.

2. Cylindrical beads were found in the burials 3 and 5 of Giurgiulesti cemetery (fig.140: 34) and, perhaps, in the burial 2, kurgan 3 near stanitsa Baturinskaja.

There also were discoid **beads from resinous black material** in the Giurgiulesti cemetery, which fell into pieces.

Small **beads from white pasta** were found in the burial 4 of Giurgiulesti cemetery, while beads from gray, semi-transparent, solid material decorated clothes in the burial near khutor Popov (fig.140: 31).

Some types of **pendants** are known in the monuments of the second period. They were made of deer teeth, sea shells, bones, copper and gold.

1. Pendants from deer teeth adorned clothes in the burial 3 of Giurgiulesti cemetery (fig.140: 24).

2. Pendants from seashell with holes were found in the burials 1, 2, 3 and 5 of Giurgiulesti cemetery, too (fig.140: 30).

3. Broken bone elongated pendant accompanied the burial in the Lugansk (fig.140: 25).

4. Copper pendants in the form of shell with holes originated from the burial 10 in kurgan 10 of Alexandrovsk and Veselaja Roscha (fig.140: 40-42). Some of them had chisel ornamentation. N.V.Ryndina considers those pendants as the imitation of half-spherical pendants from the Varna cemetery with the chisel ornamentation.

5. Copper ring-shaped pendant from the thin blade with a diameter of 1,2 cm was found in the burial 9, kurgan 5 of Mukhin 2 (fig.140: 36).

6. Copper pendants in one and a half turn from wire with rectangular section, which originated from the burial 3 of Giurgiulesti cemetery (fig.140: 37).

7. Spiral copper pendant was found in the burial near Verkhniy Akbash village.

8. Spiral gold pendants decorated clothes of dead man in the burial 4 of Giurgiulesti cemetery (fig.140: 35).

Pectorals from boar fangs with holes for fixing and, sometimes, loops on the one side were also used as adornments. They were found in the burial 1 in kurgan 15 of Veselaja Roscha; burial 4 of Liventsovka; burials 1, 3, 5 of Giurgiulesti cemetery (fig.140: 26, 38, 39). Some of them had ornamentation from notches and holes for hanging of copper rings.

Plates-braids (?) of two types from copper and nacre are known for the second period.

1. Rectangular blades from nacre without holes and grooves for fixing (fig.140: 32). They accompanied the burial 2 of Giurgiulesti cemetery.

2. Semicircular copper braids with two holes for fixing were found in the Verkhniy Akbash (fig.140: 43, 44).

Different **bracelets** are typical for the second period. Bracelets from copper strips and rods appeared in addition to the bracelets of the first period, which were made of wire.

1. Spiral copper bracelets from wire were found in the burials 1, 3 and 5 of Giurgiulesti cemetery (fig.140: 46-48). They had circular, oval, rectangular and D-like section (fig.105: 9, 11-17, fig.108: 9-14, fig.111: 3-6).

2. Spiral copper bracelet from strip accompanied the burial 5 of Giurgiulesti cemetery (fig.140: 49).

3. Copper bracelet from circular rod with closed ends was discovered the burial 10 in kurgan 10 of Alexandrovsk (fig.140: 45).

4. Stone bracelet with rectangular section is connected with the burial 2 in kurgan 18 of Komarovo (fig.140: 50).

Thus the study of adornments shows, that types, which were similar to the preceding Lower Don culture (plates-braids from fang, circular bone beads, nacre beads with the cut segment, stone pendants), preserved during the first period of eastern variant of the Sredniy Stog culture, while they were not found in the monuments of the second period. Stone beads, pendants from deer teeth and small circular beads from nacre were used more frequently during the first period. Only circular beads and bracelets from the wire were numerous among the copper adornments.

Middle and big nacre beads, beads from *Dentalium*, bone cylindrical beads with notches, cylindrical copper beads, two new types of bracelets, copper pendants in forms of shells and circular braids, beads from paste, temporal pendants, boar fangs with loop and holes for pendants distributed in addition to small nacre beads during the second period.

We have not known any adornments of the third period of Sredniy Stog culture in the eastern region, because of the rarity of burials and absence of their full publications.

Specific details of clothes from horn or bone are found in the burials of the eastern variant of the Sredniy Stog culture. Scientists have been interested in these artefacts, which are conditionally called as “**clasps**”, “protocheek-piece” or “tsurkas” (Даниленко, Шмаглий 1972; Даниленко 1974; etc.) during the last 40 years. They are represented with bone or horn rods with protruding loop in the middle of one of its long sides. The most detailed catalogue of those finds was made by I.V.Manzura, who mentioned, that they had been found on settlements of the end of Tripolye A and B I and synchronous monuments of the Sredniy Stog culture, Bolgrad-Alden group and the Early Eneolithic site of Northern Caucasus (Манзура 2000, c.260-261). He suggested, that the concentration of “clasps” in the western area, including the most ancient finds, testifies their Tripolye origin.

Analyzing these artefacts, I should note, that they were found, mainly, at settlements, and only two of them were in the Sredniy Stog burials (fig.139). These finds allow me to make a suggestion about their using. “Clasps” accompanied burials of men: man aged 30-35 (burial 46 in kurgan 1 of Alexandrovsk) and man aged more than 55 years (burial XXI of Mariupol cemetery). The “clasp” from the Mariupol burial was 15,7 cm in length and situated in parallel with the right shoulder of skeleton and above it. The second find from the Alexandrovsk burial with one broken end was situated to the left from the waist, between the body and the left ulna. The group of flint blades was situated not far from it. It is interesting, that both finds were broken, probably, knowingly. Find from Alexandrovsk cemetery had some attrition on the loop from the inner side. The disposition of “clasp” in the Mariupol cemetery allows me to suggest, that it was used for the fixation of clothes, presumably, a cloak. Similar find from the Alexandrovsk burial might be used as the “clasp” of bag, in which the flint blades were lay. The attrition of bone on the bend of the loop does not contradict to it.

The study of chronology of the “clasps” shows, that artifact from the Mariupol cemetery (about 5300 BC) is the oldest, while the “clasp” of Lenkovtsy (Tripolye A – PreCucuteni III/3) is younger (about 5100-5000 BC). Finds from the sites of the end of the stage A and Tripolye B I (Cucuteni A 1-2, A 3), which are dated about 4700-4550 BC, are the most numerous. They are related to such settlements, as Novye Ruseshty 1, Sabatinovka 1, Berezovskaja HPS, and Hebeshesht.

Taking into account, that artifact from the Mariupol burial is the oldest and “claps” are distributed only in cultures, which population contacted with the Sredniy Stog bearers, we can suggest, that an origin of those objects was connected with the Sredniy Stog culture, and they were, perhaps, the element of ceremonial clothes.

I can’t exclude, that their prototype was represented with the plate from boar fang with two holes in the middle of the one of long sides, which was found in the Neolithic burial LXXXIII of Mariupol cemetery (fig.139: 14). It lay across the body in the upper part of dead man’s stomach (Макаренко 1933) and, perhaps, was used as the “clasp” for the burial clothes.

Prestigious items

I can consider a stone mace from the burial XXIV of Mariupol cemetery as a prestigious item for the first period (fig.141: 1), while a horn head from the burial in Lugansk and the dart with gold brackets from the Giurgiulesti represent this group for the second period (fig.141: 3, 4).

5.1.2. FUNERAL RITE

Nowadays 52 burials of eastern variant of the Sredniy Stog culture, which included 59 skeletons, have been discovered.

5.1.2.1. First period

During the first period cemeteries (Mariupol and Karataevo) and kurgan burials (staniza Staronizhesteblievskaja) were investigated. The burials were constructed in quadrangular (burials 13A, 29 and 30 of staniza Staronizhesteblievskaja) and oval (burial 21 of Mariupol cemetery and burial 13 of staniza Staronizhesteblievskaja) pits.

The use of **stone** is typical for the ground burials. Stone groups lay above the grave of Karataevo, the burials XXI and XXIV of Mariupol. Burial pits of Mariupol cemetery were faced with stones.

Ochre was widely used in the funeral rite. The majority of burials were strongly painted. Ochre was not mentioned only in the descriptions of the burial with bracelets in Mariupol, Karataevo, burial 17 in kurgan 5 of Krasnogorovka, burials 27 and 33 in kurgan 5 of Koisug, burial 17 in kurgan 10 and burial 46 in kurgan 1 of Alexandrovsk.

There are inhumations among burials, as well as one cremation in the Mariupol cemetery. I have known only skeletons flexed on the back for the first period. Orientation of the burials was different, but the eastern direction was dominating. There were two burials, which were oriented to the east (burials XXI and XXIV of Mariupol cemetery) and three – to the north (Karataevo, burials 13 and 29 of Staronizhesteblievskaja) among the burials of the first period. Burials 13A, 14 and 30 of Staronizhesteblievskaja were oriented to the south, while skeleton with bracelets of the Mariupol cemetery was oriented to the west.

The study of seasonal deviations of the sun shows that the majority of burials were made in the warm periods of the year.

Funeral clothes

Numerous adornments and their disposition on skeletons allow us to suggest the existing of some elements of funeral clothes: head-dress, belts, shirts, which reached a lower part of pelvis, dresses or skirts, which reached foots.

Plates from boar fangs were sewed on the clothes during the first period, as like as, perhaps, pendants from sea shell, deer teeth and their imitations. Beads from different materials were used as necklaces. Necklaces could be also consisted of pendants, which were made of teeth. Rows of beads and pendants could be also sewed on the clothes. As a result, I can reconstruct some variants of clothes for the first period.

The first variant of the funeral clothes is the fullest. It included the decorated head-dress and front surface of shirt, lap and belt. It was represented by the burial of adult from the Staronizhesteblievskaja cemetery (burial 29). His head-dress was ornamented with pendants from deer teeth, cylindrical stone and bone beads. All front surface of the clothes from collar to lap was decorated with 19 jet beads. Four blades from boar fangs were fixed to the belt from the right. Belt or lap could be adorned with bone or nacre beads, which were found near the pelvis.

The second variant of the clothes was represented in the burials of adult (grave 13) and child (grave 13A) of Staronizhesteblievskaja. The head-dress of adult was adorned with pendants from deer teeth. We can consider three plates from boar fang, which lay across the pelvis, as the belt remains, as well as bone and nacre beads, which formed accumulations in the lower part of pelvis, and, perhaps, fixed an end of the belt. The head-dress of child was decorated with rows of bone beads. There were also four plates from boar fang and circular bone beads on the waist.

The third variant of the funeral clothes included clothes with the decorated collar, breast and belt. It was represented by the burial of adult from the Mariupol cemetery (burial XXIV). Two plates from fang were fixed to the collar under the chin. According to the plan of burial (fig. 67:10), bone beads, which were not mentioned by N.E.Makarenko (Макаренко 1933, с.71-72), were sewed or hanged on the breast. Costume also included richly decorated belt with plates from boar fang in conjunction with different beads and teeth of marmot. Ends of

belt were tied on the right, according to the beads disposition, where 13 (?) short rows of nacre beads with two bone beads and one copper bead, which were fixed to them, preserved. The dangling parts of belt, perhaps, were decorated with 15 teeth of marmot.

The fourth variant is represented by the costume of adult from the burial 30 of Staronizhesteblievskaja, which had ornamented neck, belt and, perhaps, lap of a shirt. Bone beads from decorated collar or necklace were found on the neck of the des. Probably 124 pendants from deer horn, which imitated deer teeth, and 54 pendants from deer teeth, which lay to the left of pelvis and waist, were remains of decorated ends of the belt. The lap of shirt, perhaps, was decorated with circular bone beads, which situated below the pelvis.

The fifth variant includes funeral clothes with neck adornments only. It is represented by the costume of adult from the burial 14 of Staronizhesteblievskaja, where nacre beads were found near the neck.

It is possible to consider bracelets on hands of the adult (?) from the Mariupol cemetery as a detail of the funeral clothes.

Probably a bone rod with a hole (clasp?) above the right shoulder of old man in the burial XXI of Mariupol was an element of the funeral clothes. There were also one copper and one nacre bead, but I do not know, whether they accompanied the burial of that dead or the adjacent man aged 30-35.

Thus, during the first period funeral clothes included head-dresses, decorated with pendants from deer teeth and beads from different materials. Collars were ornamented with plates from boar fangs and, perhaps, beads. There were also beads on necks. Belts were decorated with plates from boar fangs and there were also rows of beads and animal teeth on their ends. Laps of shirts were decorated with beads. There were also bracelets on arms.

Grave goods

Inventory of the first period included medium and large flint blades, a scraper, a triangular bifacial point, a black stone with traces of use and bone artifacts.

The bone artifacts accompanied two burials of the Staronizhesteblievskaja (burials 13A and 30). There was the fragment of tool with hole near the feet and a large bone rod in pit infill in burial 13A. There also was a borer under the pelvis (between thighs) in the burial 30.

The large blades and their fragments with a retouch were found in the cremation and burial XXI of Mariupol cemetery, Groznyi, burials 13 and 14 of Staronizhesteblievskaja. The medium blades with a retouch accompanied the burials in Karataevo, cremation in Mariupol and burials 14 and 30 of Staronizhesteblievskaja. The end scraper on large blade was found in the burial 14 of Staronizhesteblievskaja.

Some regularities of the disposition of stone inventory in the burials are traced. For example, the long retouched blades situated near hands: in the right arm of skeleton (burial XXI of Mariupol cemetery) and under the right hand (Karataevo). Fragments of blades concentrated near upper part of body. For example, in the burial 14 of Staronizhesteblievskaja they were situated near the scull, while in the burials 14 and 30 they lay near the shoulders and on the breast, and in the burial 30 they were found to the right from the belt. I also should mention the disposition of the scraper in the burial 14 of Staronizhesteblievskaja, which was found on the scull.

The point and black stone with traces of use were found near the cremation in Mariupol.

Burial XXIV of Mariupol cemetery was accompanied with a mace from dark-green stone, which lay on the clavicle to the right. Traces of decomposed wood from a mace handle preserved in grave, too.

It is possible to consider an animal tooth, which lay to the left from the feet in the burial 30 of Staronizhesteblievskaja, as a part of inventory.

5.1.2.2. Second period

Ground and kurgan burials are known for the second period. Burial constructions become more variable. Oval (burial 46 in kurgan 1 and burial 10 in kurgan 10 of Alexandrovsk, Moskva 1, Popov, burial 28 in kurgan 9 of Tuzluki, burials 14, 15, 17 and 20 in kurgan 3 of Baturinskaja) and quadrangular (Yama, Lugansk, burial 9 in kurgan 1 of Alexandrovsk, burials 3 and 4 of Bessergenovka, burial 17 in kurgan 5 of Krasnogorovka, burial 6 in kurgan 3 of Mukhin 1, burial 27 in kurgan 9 of Tuzluki, Verkhniy Akbash, burial 1 in kurgan 15 of Veselaja Roscha, burial 18 in kurgan 2 and burial 9 in kurgan 7 of Komarovo, Suvorovskaja) pits remained. Furthermore, new types of pits appeared, such as pits, which form was similar to the triangle (burial 27 in kurgan 5 of Koisug), very deep pits with flanges (burial 4 of Giurgiulesti), pits with alcoves (burial 33 in kurgan 5 of Koisug, burial 1 of Giurgiulesti). Catacombs (burials 9 and 30 in kurgan 5 of Mukhin 2; burials 2 and 3 of Giurgiulesti) have been known, too.

The use of **stone** is fixed for the ground and kurgan burials. A facing of pits with stones was fixed in the Yama and Lugansk burials. A stone lay under the head of the dead in Yama. Stones were also used in the overlapping of burial 4 of Giurgiulesti. A cromlech was discovered around the burial 6 in kurgan 3 of Mukhin 1 for the kurgan burials. Stones were also found in the infill of pit of burial 3 in kurgan 24 of Veselaja Roscha and at entry to a catacomb chamber in the burial 9 in kurgan 5 of Mukhin 2.

Wood was also used in the funeral rite of the second period. The overlapping of the burial 9 in kurgan 5 of Mukhin 2 was made of poles, which supported stone plates. Wooden billets were used as an entrance barrier in a catacomb chamber of burial 30 of the same kurgan. Wooden overlapping of pit was found in the kurgan burial near staniza Suvorovskaya. It was also traced in the burial 4 of Giurgiulesti cemetery, where it overlapped pit with flanges, which depth was about 5 m, and supported stones. There also was wooden flooring in the burial 1 of Giurgiulesti and burial 30 in kurgan 5 of Mukhin 2.

Traces of **fire** were found in the ground burials 3 and 4 near staniza Bessergenovskaja. Perhaps, there was a campfire in the burial 3, which was testified by burnt pit walls and streak of burnt soil with burnt nubbins in the infill. Chernozem with layers of burnt soil also filled the pit in the burial 4.

Ochre was widely used in the burial rite. All burials were intensively painted. Sometimes there were the most intensively painted spots, for example, the left side of skeleton in the burial 4 or the left elbow of skeleton from the burial 3 of Bessergenovskaja. I also should noted pieces of ochre, which were found on the pelvis and near the scull of burial 9 in kurgan 5 of Mukhin 2 and burial 27 in kurgan 5 of Koisug.

Sometimes, bottoms of pits in kurgan burials were also sprinkled with **chalk** (burial 17 in kurgan 5 of Krasnogorovka, burials 9 and 30 in kurgan 5 of Mukhin 2) and coal (khutor Popov).

Organic mats were also traced in the ground (burials 3 and 4 of Giurgiulesti cemetery) and kurgan burials (burials 7 and 8 in kurgan 5 of Krasnogorovka, burial 27 in kurgan 9 of Tuzluki, Chongrad) of the second period. Remains of cane mats were found in the burials 9 and 30 in kurgan 5 of Mukhin 2 and near the khutor Popov, too. An entrance to the alcove in the burial 33 in kurgan 5 of Koisug was closed with cane.

Ritual construction was found in the Giurgiulesti cemetery. It was oriented to the world's sides and consisted of the three grooves, which had "П"-form (fig. 103:1). One of them was adjoined to the rammed square (diameter about 2 m) with a fireplace, diameter of which was about 90 cm. Not far from the ritual construction circular sacrificial pit with the bull bones and sculls was

found (fig. 103:3). Perhaps, animal sculls above the burial 4 of the same cemetery also represented remains of funeral feast. Fragmented ceramics from the burials of Alexandrovsk and Baturinskaja burial mounds, fragments of stone bracelet near the burial 18 in kurgan 2 of Komarovo and flint tools on the ancient surface of kurgan 9 of Tuzluki belonged to remains of funeral feast, too.

Skeletons, which lay flexed on the backs, dominated during the second period. We know only one burial, which was out of the anatomical order, so-called “partitioned skeleton” (burial 20 in kurgan 3 of Baturinskaja). E.S.Sharafutdinova considers it as the remains of ritual sacrifice (Шарафутдинова 1983). On the other hand, that skeleton might have belonged to a man, who died during the winter, but was buried in the spring. The orientation of burial 20 (strictly to the east), which corresponds to the burial in the beginning of the spring, testifies this hypothesis. It is possible, that this man was buried in the end of March, perhaps in the tomb of his relative, when the soil was thawed out.

Eastern orientation dominated among the burials of the second period (21 burials from 39): Lugansk, burials XXI and XXIV of Mariupol; burials 9 and 46 in kurgan 1 and burials 10 and 17 in kurgan 10 of Alexandrovsk; burial 1 in kurgan 15 and burial 3 in kurgan 24 of Veselaja Roscha; burial 6 of Mukhin 1; burials 9 and 30 in kurgan 5 of Mukhin 2; burials 14, 15, 20 in kurgan 3 of Baturinskaja; Verkhniy Akbash; burial 18 in kurgan 2 and burial 9 in kurgan 7 of Komarovo; Suvorovskaya; burials 1-4 of Giurgiulesti. Sometimes northern (Yama, khutor Popov, burial 28 in kurgan 9 of Tuzluki) and western orientations (burial 17 in kurgan 3 of Baturinska, burial 33 in kurgan 5 of Koisug, burial 27 in kurgan 9 of Tuzluki, Chongrad) were used.

Funeral clothes

Diverse variants of funeral costumes can be reconstructed for the second period. Small paste beads and copper plaques appeared during that time. Splintered boar fangs with holes and, sometimes, loops, copper plaques with two holes, deer teeth and their imitations, as well as pendants from shell and copper in the form of shell ornamented the clothes. Costumes were also supplied with necklaces from different beads and, perhaps, pendants in the form of deer teeth. Unfortunately, one of the richest monuments - Giurgiulesti cemetery – was not published yet as a whole complex and therefore I have no authentic view on the richest funeral costumes of that time.

The first variant of funeral clothes is represented by the costume of child from the burial 3 of Giurgiulesti and included decorated head-dress, collar, a front of clothes and arms. The head-dress included two temporal rings. The collar was decorated with two splintered boar fangs with holes on the ends and loop on the reverse side. There was a necklace from copper and stone beads on the breast and three bracelets on the each arm (on the forearm, elbow and wrist). In addition to it, costume was decorated with pendants and beads, which location was not mentioned in the publication.

The second variant is represented by a costume with a decoration on a head-dress, collar and arms. It belonged to a child from burial 10 in kurgan 10 of Alexandrovsk. There was a copper pendant on his scull and necklace from five (?) similar pendants near the jaw. It was also a bracelet from copper wire on the right humeral bone.

The third variant is represented by a costume of adult from the kurgan near Verkhniy Akbash and included decoration on a head-dress, a breast and lap of long skirt or dress. A copper spiral pendant was fixed to the head-dress. Two copper plaques were also sewed to the clothes on the breast and two lines, which consisted from more than 30 similar plaques, indicated the lap of clothes near feet.

The fourth variant includes a costume, which has decoration on a head-dress and clothes on a breast. It belonged to a 20-25-year-old man from the burial 4 of Giurgiulesti. His head-dress, perhaps, was ornamented with small

beads from white pasta, which lay in two concentric circles to the left and to the right from the scull. Two gold spiral pendants were found on the breast. In addition to it, his costume was decorated with the cylindrical bead from shell, which disposition was not mentioned.

The fifth variant is represented by the adornments on a breast and arms. In was embodied by an adult from the burial 5 and child from the burial 1 of Giurgiulesti. There were six necklaces from copper beads on the breast of adult, while four bracelets were on his arms (two for each arm). The location of boar fang with holes on the ends and loop on the reverse side, as well as pendant from fossilized shell, which was found in the same burial, was not mentioned. There were two splintered boar fangs on the breast of the child from the burial 1. One of them had holes on the sides; cylindrical copper beads were found in the seven holes of the low side. The second fang had holes on the ends. Necklace from 75 short cylindrical copper beads hanged partially from the two fangs. There were four copper bracelets on the arms. In addition to it, the child clothes were decorated with some pendants and beads, which location was not mentioned.

The sixth variant includes adornments on a breast and lap. It is represented by a costume of 17-20-year-old woman from the burial 9 in kurgan 5 of Mukhin 2. Copper ring and 10 copper beads, which were found in the infill of the rodent’s burrow under the breast, could adorn the upper part of her costume. Nacre beads, which situated along her thighs, on the pelvis and under it, perhaps, indicated the lap of the shirt.

The seventh variant is represented by a costume of adult from the burial 4 of Liventsovka with decorated collar. He had splintered boar fang with the two holes on the ends and loop in the middle across his neck.

The eighth variant is represented by a costume of adult from the burial 1 in kurgan 15 of Veselaja Roscha, which was decorated only with boar fang blade, which lay on his breast and, perhaps, could be accompanied with four copper pendants.

The ninth variant included a shirt with a decorated lap, which belonged to the child aged 10 from the burial 28 in kurgan 9 of Tuzluki. There were two rows of bone beads on his pelvis.

A costume of adult from the burial 9 in kurgan 1 of Alexandrovsk had a few adornments. There was a cylindrical bead from the *Dentalium* shell under the right knee, while a bone cylindrical bead was found under the breast to the right.

Beads, which were winded round the body and feet of the deceased, represented the specific addition to the funeral clothes in the burials 1, 3 and 5 of Giurgiulesti cemetery.

A comparison of the funeral costumes of the second period with the costumes of the first period shows, that the head-dresses, which was decorated with beads, became rarer. They were replaced with the temporal rings and single metal pendants. Collar was decorated with the splintered boar fangs with holes for fixing and, sometimes, pendants in contrast to the boar fang plates, typical for the first period. Breast, as earlier, was adorned with necklaces and some pendants. New breast adornments were represented by the copper plaques and splintered boar fangs, which sometimes were supplemented with the copper pendants. These fangs could be also sewed on the breast.

It is interesting, that we have not known any adornments of the second period, which could be related to belts. The location of ornaments in the lower part of pelvis allows me to interpret them as the decoration of the shirt laps, which were also embroidered with beads. For the first time I can fix the decoration of lap, which reached ankles. Bracelets become more frequent at the monuments of the second period. It should be also mentioned the use of beads, which were winded round the bodies of the deceased.

Grave goods

Inventory of the second period is more diverse, then the graves goods of the first period.

I should mention many flint tools, among which **blades** are the most numerous. Large flint blades, which width was bigger than 2,4 cm, and their fragments were found in the 13 burials (the burial 9 in kurgan 1, burial 10 in kurgan 10 of Alexandrovsk, burial 4 of Bessergenovskaja, burial 3 in kurgan 24 of Veselaja Roscha, burial 18 in kurgan 2 and burial 9 in kurgan 7 of Komarovo, burial 2 in kurgan 1 of Lugansk (skeletons 1, 2, 3), burial 9 in kurgan 5 of Mukhin 2, burial 6 of Moskva, burial 4 in kurgan 1 of staniza Suvorovskaja, burial 4 of Giurgiulesti and Yama cemeteries).

Medium blades and their fragments were found in the 22 burials (the Yama and Lugansk cemeteries, burials 9, 46, 55 in kurgan 1, burials 10 and 17 in kurgan 10 of Alexandrovsk, burials 14 and 20 in kurgan 3 of Baturinskaja, burial 5 of Bessergenovskaja, burial 1 in kurgan 15 and burial 3 in kurgan 24 of Veselaja Roscha, Verkhniy Akbash, burials 1 and 3 of Giurgiulesti, burials 8 and 18 in kurgan 5 of Krasnogorovka, burial 33 in kurgan 5 of Koisug, burial 6 in kurgan 3 of Mukhin 1, khutor Popov, burial 27 in kurgan 9 of Tuzluki, Chongrad).

Microlithic blades and their fragments, which width was lesser than 1 cm, accompanied four burials (the burial 46 in kurgan 1 of Alexandrovsk, burial 1 of Giurgiulesti, Lugansk, burial 9 in kurgan 5 of Mukhin 2).

Some regularities are traced in a location of blades and their fragments in the burials. For example, the long blades of large and medium width often lay near hands: the large blades were found under the right hand or in the hand of 35-40-year-old man from the burial 2 in kurgan 1 of Lugansk, man of middle age from the burial 4 in kurgan 1 of Suvorovskaya, 30-40-year-old man from the burial 9 in kurgan 1 of Alexandrovsk and adults from the burial 18, kurgan 2 of Komarovo and burial 6 of Moskva 1. Perhaps, the large blade without a retouch, which was found in a burrow near the right hand of the adult from burial 17 in kurgan 5 of Krasnogorovka, also had the same location.

The medium blades were located under the right hand of man from the burial 8 in kurgan 5 of Krasnogorovka and in the left hand of adult from the burial 20 in kurgan 3 of Baturinskaja. The fragment of the middle blade was found near the right hand of adult from the burial 11 of kurgan near Verkhniy Akbash.

Two large blades were found on the belt near hands in the burials of young woman from the burial 9 in kurgan 5 of Mukhin 2 and the 40-45 year-old men (skeleton №2) from the burial 2 in kurgan 1 of Lugansk.

The blades often located near the belt, transversely to it, and far from hands: the medium blades in the female burial 27 in kurgan 9 of Tuzluki, the blades in the adult burial 14 in kurgan 3 of Baturinskaja and adult burial 1 in kurgan 15 of Veselaja Roscha, the blades in the child burial 19 in kurgan 1 and child burial 17 in kurgan 10 of Alexandrovsk.

Sometimes, exclusively the large or medium blades, which were found near hands and belts, represented the whole flint inventory in graves: the adults from the burials 14 and 20 in kurgan 3 near staniza Baturinskaja, burial 6 of Moskva, burial 27 in kurgan 9 of Tuzluki, the man from the burial 8 in kurgan 5 of Krasnogorovka, the 35-40-year-old man from the burial 2 in kurgan 1 of Lugansk, the man of middle age from the burial 4 in kurgan 1 of Suvorovskaja.

The majority of burials were accompanied with some flint artifacts. The next sets have been fixed:

1. Blade and flake, which accompanied the child from the burial 17 in kurgan 10 of Alexandrovsk.

2. Blade and push-plane, which accompanied the man from the burial 8 in kurgan 5 of Krasnogorovka.

3. Blade and point (burial 17 in kurgan 5 of Krasnogorovka).

4. Blade and two scrapers (burial 18 in kurgan 2 of Komarovo).

5. Blade, flake and axe (Verkhniy Akbash).

6. Two blades and core (burial 3 of Giurgiulesti).

7. Two blades and flake (burial 4 of Bessergenovskaja)

8. Two blades and point (burial 2 of Yama).

9. Two blades, scraper and two drills (burial 3 in kurgan 24 of Veselaja Roscha).

10. Three blades, which accompanied the children from the khutor Popov and burial 10 in kurgan 10 of Alexandrovsk.

11. Four blades, which accompanied the young woman from the burial 9 in kurgan 5 of Mukhin 2 and 40-45-year-old man from the burial 1 of Lugansk.

12. 11 blades, two scrapers on blades, one scraper on flake and fragment of tool, which accompanied the 30-35 year-old man, from the burial 46 in kurgan 1 of Alexandrovsk.

13. 12 blades, flake and two axes, which accompanied the 40-45-year-old man from the burial 1 of Lugansk.

The **blades and their fragments** were, mainly, related to an upper part of body. There was the medium blade on the breast of adult from the burial 33 in kurgan 5 of Koisug. The large and medium blades were found under the scull of 40-45-year-old man (skeleton №1) from the burial 2 in kurgan 1 of Lugansk, while one medium blade with scaly retouch was on his breast to the left and large blade on the outer side near his right elbow. The man, aged 30-35 years, from the burial 46 in kurgan 1 of Alexandrovsk had blades and their fragments near the upper part of his body and in the infill. The blade was found near the scull of skeleton №1 in the Yama cemetery. There were the blades to the left and to the right from the scull of skeleton №2 from burial 2 in kurgan 1 of Lugansk (10 blades). The blades were also found to the right and to the left from the child body (from belt to scull) in the burial 10 in kurgan 10 of Alexandrovsk. In the burial 9 in kurgan 1 of Alexandrovsk one blade, which length is 19 cm, was found near the left shoulder, another – to the right from the scull, two other – beyond the scull, one – near the left knee, two blades – on the left part of the breast, one – on the right part of the breast, one, perhaps – to the left from the humeral bone.

The blades lay not far from the pelvis in the burial of khutor Popov. The blade was found under the knee only once (Yama).

Flakes are known in the five burials: the burial 17 in kurgan 1 of Alexandrovsk, Verkhniy Akbash, burial 5 of Bessergenovskaja, burial 2 in kurgan 1 of Lugansk and burial 1 of Giurgiulesti. There were flakes with a retouch in the Lugansk, while in Alexandrovsk they were without it. A push-plane on a flake accompanied the adult from the burial 8 in kurgan 5 of Krasnogorovka. We should also mention a fragment of flint with signs of use from the burial 46 in kurgan 1 of Alexandrovsk.

Two burials were accompanied with **cores** – the burial 3 of Giurgiulesti and burial 29 in the kurgan 9 of Tuzluki. There also was the directional core of circular chipping in the ruined burials of the Yama cemetery.

There were **scrapers** in three burials: two end scrapers on large and medium blades and the double side scraper on a flake in the burial 46 in kurgan 1 of Alexandrovsk, the end scrapers on medium blades in the burial 18 in kurgan 2 of Komarovo (two – near the right shoulder) and burial 3 in kurgan 24 of Veselaja Roscha (one – to the left from the scull). As a whole, one of the specific features of this period is the presence of end scrapers on long blades in the burials.

Two **drills** on the blades were found near an adult in the burial 3 in kurgan 24 of Veselaja Roscha.

Two burials (Verkhniy Akbash and burial 2 in kurgan 1 of Lugansk) and ruined complexes of the Yama cemetery were accompanied with **axes**. The flint axe was found near the adult from the Verkhniy Akbash (under the pelvis), three axes – near the 40-45-year-old man from the burial 2 in kurgan 1 of Lugansk (one – to the left from the scull, two – in the sack between his thighs). The similar flint axes and polished axes from soft rock were also found in the ruined burials of Yama cemetery. Two polished adzes were found in the sack between the thighs of man from the burial 2 in kurgan 1 of Lugansk.

Some **pieces of stone** have been also found: bars from sandstone accompanied the burial 2 in kurgan 1 of Lugansk (to the right on the neck) and a child from the khutor Popov; pebbles, which were found in the burial 46 in kurgan 1 (two above the left shoulder) and burial 17 in kurgan 10 (near the belt) of Alexandrovsk; piece of hematite, which accompanied the woman from the burial 9 in kurgan 5 of Mukhin 2 (in the burrow under the breast). Two stones for the grinding of ochre lay near the right shoulder of adult from the burial 3 in kurgan 24 of Veselaja Roscha.

Copper awls accompanied four burials (the children from the burials 2 and 3 of Giurgiulesti, the young woman and man, aged more than 45 years, from the burials 9 and 30 in kurgan 5 of Mukhin 2).

Bone and horn artifacts includes the bone tubule from the burial of 40-45-year-old man in the kurgan 1 of Lugansk (artifact was found to the right from the scull), bone rods, which were found near an adults from the burial 18 in kurgan 2 of Komarovo (near the scull and the right shoulder) and burial 9 in kurgan 7 of Komarovo (to the left from the shoulder). Horn rods, which were used, perhaps, as the mediators or fabricators for the percussion of flint, accompanied the 30-35-year-old man from the burial 46 in kurgan 1 of Alexandrovsk. The horn blade with the distinguished head, which was used, perhaps, as the pendant, accompanied the 40-45-year-old man from the burial 2 in kurgan 1 of Lugansk. The tubule from deer horn, which is called “phallus” in publication, was found in the groin area of skeleton in the burial 4 of Giurgiulesti.

Various kinds of **weapons** are also known in the burials of the second period. They include the darts from horn and spear or sword from horn and wood with the flint inserts, which were found in the burial 4 of Giurgiulesti (fig.137: 4, 6, 7); the copper stiletto (fig.141: 5), which lay on the bones of the right arm and the horn point from the same burial of man, aged 20-25.

The flint points are not numerous. One flint point was found on the breast of 30-40-year-old man from the kurgan 1 in burial 9 of Alexandrovsk, as well as near the adult from the burial 18 in kurgan 5 of Krasnogorovka. The fragment of point was found near the left shoulder of the deceased in the Yama cemetery. I should also mention triangular points with flat and bulging basements from the ruined burials of Yama.

Two burials were accompanied with the **symbols of power**. The horn head from the burial of Lugansk (fig.141: 3) and the dart made of horn and wood with the gold covers, which was found near the head and the right shoulder of burial 4 of Giurgiulesti (20-25-year-old man), could be related to them.

There are also some ***Unio* shells** without handling, which accompanied children from the burial 1 of Giurgiulesti and burial 10 in kurgan 10 of Alexandrovsk.

Vessels were found near children from khutor Popov and the burial 2 of Giurgiulesti, as well as near adults from the burial 1 in kurgan 15 and burial 3 in kurgan 24 of Veselaja Roscha, burial 18 in kurgan 2 of Komarovo, burial 31 in kurgan 9 of Tuzluki. But the Sredniy Stog ceramics accompanied only three burials (khutor Popov, burial 1 in kurgan 15 of Veselaja Roscha and burial 31 in

kurgan 9 of Tuzluki). Pot of the Zamok-Svobodnoe type was found in the burial 3 in kurgan 24 of Veselaja Roscha, while vessel of the Gumelnitza culture lay in the burial 2 of Giurgiulesti. All vessels were found near the scull.

Some burials were accompanied with **animal bones**, which can't be related to food offerings. For example, dog's astragaluses and shoulder-blades of cattle were found near the young woman in the burial 9, kurgan 5 of Mukhin 2. Shoulder-blades lay near the feet and placed in parallel to each other (fig.83: 10). Their upper epiphysises were cut, while ribs and low ends were polished. A shoulder-blade of ovicaprids with forty notches on its side was found in the burial 4 of Giurgiulesti. Astragaluses lay near the head of 35-40-year-old man (skeleton №3) from the burial 2 in kurgan 1 of Lugansk. There was a worn-out fang of large predator under the right elbow of woman from the burial 27 in kurgan 9 of Tuzluki, while grinded off teeth of a large animal were found under the left arm. A fragment of cortical bone was discovered under the pelvis of man from the burial 7 in kurgan 5 of Krasnogorovka.

5.1.2.3. Third period

I know only two kurgan burials from the third period: the burial 7 in kurgan 5 of Mukhin 2 and the burial 6 in kurgan 2 of Mokry Chaltyr. One of them was made in the pit, which form was similar to the oval (Mokry Chaltyr), while another was made on the ancient surface (Mukhin 2). The use of stone was also fixed in the burial of Mokry Chaltyr. There was a cromlech as well as facing of pit walls and overlapping by stones.

I also should note remains of funeral feast in the kurgan near khutor Mokry Chaltyr, which included a broken vessel.

In addition to the flexed on the back skeletons, which were dominating in the earlier periods, we found burials, which were flexed on the side (Mukhin 2). The burials were oriented to the west (Mukhin 2) and to the east (Mokry Chaltyr).

I have no data about the funeral clothes of the third period.

Grave goods of the third period are not numerous. There were the flake and the tool on the flake in the burial of Mokry Chaltyr. The flake and pot were found in the burial of Mukhin 2.

Thus the study of funeral rite of the eastern variant of the Sredniy Stog culture shows, that ground burials were known only for the first and second periods. Population of the Sredniy Stog culture, perhaps, began to construct kurgans during the first period. In the course of the second period, the burials in catacombs, organic mats, chalk grit and wood usage appeared, intact vessels, while adornments of the burial costume became more monotonous (not so many types of bone and nacre beads, absence of plates-braids). The burials of the first and the second periods often were accompanied with flint blades. I should mention burials on the ancient horizon; burials, flexed on the side, and replacement for flint blades with flakes among new features of the third period.

5.2. WESTERN VARIANT OF THE SREDNIY STOG CULTURE

5.2.1. MATERIAL CULTURE

Ceramics

Now only ceramics of the second and the third periods have known. It was made of clay with pounded shell admixture.

Inner surface of pottery of the **second period** was smoothed down with the comb stamp in the horizontal direction. Hatching on the outer surface was made rarely (fig.33: 1). Vessels had point or rounded bottoms and a maximum diameter

of body in its middle part. We have known only one form of pottery for the second period – profiled pots (fig.142). The height of their necks varied from 0,5 to 5 cm. The majority of pots had outturned neck and the diameter of body larger, than the diameter of rim. The rim was usually straight cut.

Ceramics was ornamented, mainly, with the combination of drawn lines and strokes; sometimes – only with strokes, drawn lines or comb imprints. Short and long imprints of interweaved cord were used in the ornamentation, too. Only the upper third of the vessel, including the rim, had decoration, but neck of the majority of vessels was not ornamented. Complex compositions included combinations of horizontal elements with the pendent figures. Fragments of ceramics, which were ornamented with the long comb stamp, were found in Semenovka. They are close to the similar pottery of the eastern variant.

The **third period** included vessels with point bottoms and, perhaps, a few vessels with flat bottoms (fig.13: 14; fig.15: 10; fig.16: 17; fig.18: 4, 5; fig.20-26; fig.27: 12-14; fig.33: 5). Their inner surface was smoothed down with the comb stamp, while hatching was also often made on the outer surface (fig.20: 1, 2; fig.22: 1; fig.25: 9; fig.33: 5). The maximum diameter of body fell on the upper third of vessel. I have known only one form of pottery – profiled pots (fig.142). The vessels with the high often grooved neck and oblique inward rim dominated during that period. They were ornamented with imprints of long and short comb stamps, which formed horizontal lines, angular and triangular compositions and zigzags. Ornamentation was made on the upper part of the vessel and the rim. The neck was often decorated only on the upper edge.

Tools

As a whole, the tools on the flint blades are typical for western variant during all periods of its existence, however at the sites of the third period some scrapers were made of flakes. Population used, mainly, high-qualified flint pebble, which had gray-brown color and good clarity. Perhaps, that raw material was obtained in the Severskiy Donets basin.

Directional and bidirectional cores of circular and unilateral chipping are known (fig.132: 7-9). Large blades (with the width more, than 2,4 cm) were chipped at first, than – medium and microlithic blades (with the width lesser, than 1 cm).

The blades with a retouch or without it were used as the tools (fig.133). Laminar and quite abrupt retouch was made, mainly, on the dorsal side. The end and end-side scrapers (fig.134: 17, 21, 22, 27, 28), knifes, borers and drills were made of blades (fig.135: 9, 20, 21).

The flint flakes, as well as the blades, were often used without secondary handling. The tools were also made on them. The end and end-side scrapers were made during the second period (fig.134: 18, 20). Population began to use flakes more often during the third period. Adze-like tools (fig.25: 3) and the majority of scrapers (end and end-side ones with rounded and slanting working edges) were made on them (fig.134: 23-26).

Tools for the woodworking have known only at the monuments of the second and third periods. They include flint axes, which were made by application of bifacial technique (fig.136: 12, 13) and, often, with the following polishing, and polished axes and adzes from soft rock (fig.136: 14, 15).

The **awls** were made of bone and copper. Copper awls were found at the monuments of the first and second periods. They are represented by two types, which, according to the N.V.Ryndina opinion (Рындина 1998), have some analogies in the Varna, Gumelnitza and Tripolye A-B I cultures.

1. The awls, which were circular in section, with rounded haft (Suvorovo, Decea Muresului, the second period) (fig.135: 10, 16).

2. The awls with flat haft and tetrahedral working edge, which came from the burial 1 of Krivoy Rog (the first period) and Semenovka (the second period) (fig.135: 8, 18).

Unfortunately, many of the published awls were not drawn and their section form also was not described.

The copper wares of three cemeteries (Petro-Svistunovo, Chapli and Krivoy Rog) were related to the separate Novodanilovka metalworking center (Рындина 1998, с.167-169). Its specificity is represented by the equal use of casting and blacksmithing processes in production of wares. Dominance of one of these processes was typical for the other centers of Balkan-Carpathian metallurgical province - blacksmithing in the case of the Early Tripolye and Khvalynsk centers and casting in the case of Varna center. According to the N.V.Ryndina, the Novodanilovka metalworking represents the complex conglomeration of technical combinations, which became the result of interconnection of Varna, Tripolye and local traditions.

The **bone wares** are not numerous at the site of western variant: an elongate artefact with hole from Strilcha Skelja and a hammer from red deer horn in the Chapli cemetery (fig. 137: 18, 19).

Weapons

Now only bifacial flint spear, arrow and dart heads have known. They were made of flakes. Points of triangular form with lightly concaved, straight and lightly bulging bases are typical for the monuments of the first and second periods (fig.138: 16-25). Points with the bulging bases were still used during the third period, while the number of points with concaved bases increased (fig.138: 26-37).

The stone mace from Decia Muresului and stone scepters from Kulevcha and Suvorovo could be attributed as the weapon, too.

Flint blades can be used as the tool and weapon at the same time. It is possible to consider the long and middle blades, which were found in skeleton’s hands or near them, as knifes. The blades occupied such position in the burial 3 of Krivoy Rog (the first period) and the burial 2 of the Chapli cemetery, burials 1, 3, 4, 9 of Decia Muresului; burials 2, 8 11 of the Igren cemetery; burial 7 in kurgan 1 of Suvorovo (the second period).

It is possible, that the flint blades, which lay near belts in the burials of the second period, were the knifes, too: Gonova Mogila; the burials 7, 12 of Decia Muresului; burials 10, 16 of the Igren cemetery; burial 8 in kurgan 7 of Kut; Nizhniy Rogachik, burial 1 of the Chapli cemetery.

All these flint blades were from 7 to 23 cm in length. Only two blades from burials of children (the burials 7 and 9 of Decia Muresului) had length about 4,5 cm. Some of blades were broken before burial, for example, a great deal of the blades from Decia Muresului.

Adornments and details of clothes

The different adornments are typical for the first and the second periods. They were found, mainly, in the cemeteries.

The adornments of the **first period** are known for the Krivoy Rog cemetery. They include beads, pendants and bracelets.

Beads are represented by the two kinds:

1. Nacre beads of medium size (fig.143: 1).

2. Copper ring-shaped beads (fig.143: 3).

There also were three types of pendants:

1. Sea shells with a hole (fig.143: 2).

2. Spiral pendants, which were made of copper wire (fig.143: 4).

3. Cylindrical pendant, which was made of gold (fig.143: 6).

Now only one spiral bracelet from copper strip is known for that time (fig.143: 5).

The adornments of the **second period** are more diverse, that is connected with the large number of burials of that time. They include different beads, pendants, bracelets and pectorals from boar fangs.

Beads were made of copper and nacre.

Nacre beads are represented with rounded beads of three size variations (fig.143: 7-9):

1. The large beads with the maximum diameter larger, than 2 cm.

2. The medium beads, which diameter varied from 1 to 2 cm.

3. The small beads, diameter of which was lesser than 1 cm.

The large beads decorated clothes in the majority of burials: burials 1 and 2 of Chapli, burial 1 of Novodanilovka, burial 2 of Petro-Svistunovo, Kainary, burials 2, 2(1) and 5(2) of Decea Muresului, Lugoch, burial 1 of Kut. The medium beads were found in the burial 6 and 7 of Decea Muresului. The large and medium beads were discovered together in the burials 11, 12, 13, 15 of Decea Muresului and burials of Suvorovo. The small beads accompanied only one burial of Reka Devna.

There are three types of **copper beads**:

1. The ring-shaped beads from thick copper strips (fig.143: 10-12). These beads were found in the burials 1a and 3a of Chapli, burial 1 of Petro-Svistunovo, burials 3, 3(1) and 4 of Decea Muresului and Reka Devna. According to N.V.Ryndina, they are similar in their form to the gold beads of Varna cemetery in Bulgaria (Рындина 1998). Their size varied from 2 to 10 mm, width – from 2 to 5 mm, thickness – from 1 to 3 mm.

2. The ring-shaped beads with the ledge from thick copper strips, which accompanied the burial 2a of Chapli (fig.143: 13).

3. The cylindrical beads from the metal strip, which were discovered in the burial 1 of Gonova Mogila and, perhaps, in the burial 3 of Decea Muresului (fig.143: 14).

Pendants are rare in the monuments of the second period. They were made, mainly, of metal and represented by the three types:

1. The copper pendants in the form of shell, which were found in the burial 1a of Chapli (fig.143: 20). N.V.Ryndina considered them as the imitation of half-spherical pendants from the Varna cemetery. Study of shell-formed pendants showed, that three of them from the Chapli cemetery were made by a craftsman of high qualification perhaps an emigrant from the Varna center of metalworking. Other pendants, according to N.V.Ryndina's opinion, were made by a local craftsmen. They used the idea of final weakened annealing, which was borrowed from the Early Tripolye center and combination of complicated blacksmithing methods, which were received as the result of direct contacts with the craftsmen of Varna center of metalworking (Рындина 1998, с.160-162)

2. The long tubules from the copper sheet, which were found in the burial 1 of Petro-Svistunovo (fig.143: 25).

3. The ring-shaped gold pendants, which decorated clothes in the burials of Lugoch and Reka Devna (fig.143: 21).

Arcuated copper plates, which decorated the head-dress from the burial 3a of Chapli, were used as braids (fig.143: 17, 19).

There were many **bracelets**, which were made of copper and gold. They are represented with three types:

1. The copper bracelets from circular wire (fig.143: 22) were found in the burial 1 of Petro-Svistunovo, burial 3a of Chapli, burial 1 of Novodanilovka and Kainary. One bracelet from Chapli, according to N.V.Ryndina, represents the exact copy of Durankulak artifacts. Therefore it could be considered as the

Varna import. Another bracelet from Petro-Svistunovo considers as the Tripolye import and compares with Hebeshesht, Isvoar and the Karbynskyi hoard. She considered other finds as local artifacts (Рындина 1998, c.163).

2. The bracelet from flat copper plate in 3,5 turns was found in the burial 3a of Chapli (fig.143: 23

3. The bracelet from gold rod accompanied the burial of Lugoch (fig.143: 24).

N.V.Ryndina considered copper arcuated blades, pendants in form of shells and flat cylindrical beads as specific local artifacts (Рындина 1998). According to her, the long tubules and bracelets had the most expressive parallels in the Varna, Gumelnitza and Tripolye A-B I cultures.

There also were two types of **breast adornments**:

1. The pectorals from boar fangs with holes for fixing originated from the burial 1 of Chapli and the burial 2 of Petro-Svistunovo (fig.143: 15, 16). Sometimes they had a special ledge for fixing in the middle part.

2. The grivna from copper rod decorated clothes from burial 4 of Decea Muresului (fig.143: 18).

It is difficult to determine the exact age of the Early Eneolithic burials of the Igren cemetery. We can only suppose, that they related to the second or the third periods. The burials 5 and 10 of it were accompanied with the bone beads of the two types:

1. The ring beads (fig.143: 28).

2. The beads, which form was close to cylindrical (fig.143: 26, 27).

Adornments of the **third period** are not numerous, because a few burials of this time are known. They include two types of beads:

1. The ring-shaped copper beads (fig.143: 29).

2. The large nacre beads (fig.143: 30).

Symbols of power

For this moment, we have known three types of symbols of power for western variant of the Sredniy Stog culture (mace, zoomorphic scepter and hammer, fig.141: 4-8).

The most of them belongs to the second period: a stone cross-shaped mace from the burial 12 of Decea Muresului, a stone scepter in the form of horse head from the burial 7 in kurgan 1 of Suvorovo, a stone zoomorphic scepter from Kulevcha and a copper hammer from the ruined graves of the Petro-Svistunovo cemetery. The last could not be used as tool, because of its fragility (Рындина 1998, c.164).

The hammer of the Shiria type from the burial of Falciu belongs to the third period. Its small size testifies to its ritual function.

5.2.2. FUNERAL RITE

Now 57 burials of the western variant of the Sredniy Stog culture with 61 skeletons have been known. Four burials could be related to the first period, 40 burials with 43 skeletons – to the second period and five burials – to the third period. Eight burials of the Igren cemetery could be, perhaps, related to the second or the third period.

5.2.2.1. First period

Only one cemetery of this period has been excavated. It was situated in Krivoy Rog and included four burials in pits with ledges (the burials 1 and 3) and in oval pit (the burial 2).

Stone was used in the funeral rite. It was the stone group above the burial 3 of Krivoy Rog cemetery.

Perhaps, animal bones in the pit infill of burials 1 and 3 of the Krivoy Rog cemetery represent the remains of **funeral feasts**.

Ochre was widely used in the funeral rite and practically all burials were painted with it. Pieces of ochre were found in the burial 1 of Krivoy Rog in addition to powder.

Finds of **charcoal** are also known. It was found on the bottom of pit in the burial 1 (there was an area with charcoal near the western wall) and near the right elbow of skeleton of burial 2 of the Krivoy Rog cemetery. Remains of **organic mats** were discovered in the burial 1.

Skeletons lay flexed on the backs (the burials 1 and 2) or were in sitting position (the burial 3 of the Krivoy Rog cemetery). Burials were oriented to the east.

Funeral clothes

Adornments, which were found in the burials, and their location allows me to assume the existence of specific elements of funeral clothes: head-dresses, belts and shirts, which had reached the lower part of pelvis.

The funeral clothes of the first period were decorated with the pendants from seashells and necklaces from different beads. Beads and pendants, which were gathered in necklaces, could be sewed on the clothes.

The first variant is represented by a costume of 16-18-year-old woman from burial 1 of Krivoy Rog, where the head-dress, clothes on the breast and shirt lap or belt were decorated. Copper temporal pendants belonged to the head-dress. Six rows of copper beads (three long and three short) were found on the breast. Nacre beads, which, perhaps, decorated the shirt lap, lay on the lower part of pelvis. Twenty seashells with holes, which lay there without any system, were probably fixed to the lap.

The second variant includes a costume of man, aged 40-50, from the burial 2 of the same cemetery with decorated head-dress, collar and breast clothes, as well as an arm. Copper temporal pendants belonged to the head-dress. Six rows of copper beads were found on the breast and around the neck. A gold tubule lay under the lower jaw. A copper bracelet decorated the right arm.

Grave goods

Grave goods included a medium blade in the burial 3 and a microblade in the burial 2 of Krivoy Rog (man of 40-50 years). There also were three triangular flint points and a copper crowbar in the burial 2. The points had lightly concaved, straight and lightly bulging basements. A copper awl with bone handle lay to the right from the belt in the burial 1.

The location of inventory is also interesting. The medium blade was found under the right hand. Two dart heads lay to the left on the pelvis and one hand located near their possible shafts. One point in the same burial was under the pelvis.

5.2.2.2. Second period

Burials of this period are the most numerous. People used, mainly, the ground cemeteries, but the first kurgans also appeared (burial 1 and 2 of Gonova Mogila, Kainary, burials 1 and 7 of Kut, burial 7 in kurgan 1 of Suvorovo).

Pits had oval form (burial 1 of Petro-Svistunovo, burials 2a and 3a of Chapli) or shape, which was similar to the quadrangular (burial 2 of Gonova Mogila, burial 15 of the Igren cemetery, burial 33 of Kulevcha). There was the

trapeziform pit in the burial 7 in kurgan 1 of Suvorovo. The burial 1 of Kut and burial in Kainary were made on the ancient horizon.

Stone constructions were used in the funeral rite. Stone groups above the burials 1a, 2a, 3a of the Chapli cemetery are known, while a stone slab was used as the covering in the burial 2 of Novodanilovka. The single plate was found near the burial 12 of Igren (the second – third periods). Sometimes the pits were faced with stones (burials 1a, 2a of the Chapli cemetery). Stones were found near the skeleton from burial 2 of Gonova Mogila.

We have also known stone steles and their derivates. The stele was found in the burial 3a of Chapli. Perhaps, a vertical tile in the upper part of pit of the burials 4a-5a of the same cemetery represents its derivate. Cromlechs appeared in the end of the second period according to the materials of kurgan 1 of Suvorovo.

Ochre was widely used in the funeral rite as in the preceding period. The majority of burials were painted with it. Large pieces of ochre were found in addition to the powder in the burial 1 of Petro-Svistunovo, Niznyi Rogachik and burial 18 of the Igren cemetery. Ochre painting was used in a peculiar way in the Decea Muresului cemetery, where ochre spots were found, for example, near the left shoulder (the burial 3) or left leg (the burial 6) of skeletons. But we have also known non-painted burials, such as the burial 1 of Kut, burial 2 of Petro-Svistunovo, burial 2 of Decea Muresului, Lugoch, burial 7 in kurgan 1 of Suvorovo and the burials 3, 8, 10, 15 and 17 of the Igren cemetery.

Probably a group of flint artifacts, grindstone for ochre, bull pelvis above burial 3a; tooth of ovicaprids and a grindstone among the stones above the burial 1a of the Chapli cemetery might be interpreted as the remains of **funeral feast**. Perhaps, teeth of ovicaprids, which were found in the burials 2a, 3a and 5a of the same cemetery, also represent an evidence of the funeral feasts.

The majority of skeletons lay flexed on the backs. Some of them were flexed on the side (burial 7b in kurgan 1 of Suvorovo), in sitting (burial 5 of Igren) or in supine positions (Lugoch).

Most of skeletons were oriented to the east or north. The burials 1 and 2 of Petro-Svistunovo, burials 5, 10 and 11 of the Igren cemetery, burials 1 and 2 of Novodanilovka, Lugoch, Reka Devna, Suvorovo, burial 7 of Kut were directed to the east. The burials of Chapli, burials 3 and 4 of Decea Muresului, burials 27 and 33 of Kulevcha and burials 15, 17 and 18 of the Igren cemetery had northern orientation.

The majority of Decea Muresului burials and the burials 1 and 2 of Gonova Mogila were oriented to the south. The burial 8 of Igren (the second-third periods) had western orientation. Study of the seasonal deviations of sun indicates, that the burials were made in warm seasons of the year.

Funeral clothes

I can reconstruct more various costumes for the second period, then for the first one, because the burials of this period are more numerous.

The fullest variant of decorated elements of the funeral costume was fixed for the adult from burial 3a of the Chapli cemetery. It had decorated head-dress, belt, shirt lap and arms. Two twisted copper blades with holes were sewed on his head-dress at the crown of his head. Seven rows of copper beads were fixed to the head part of head-dress. The same beads, perhaps, were fixed to the skirt lap, which situated near knees. Spoke bones of arms were decorated with the copper bracelets.

The second variant was represented with an adult costume from the burial 2 of Decea Muresului. His head-dress and belt or shirt lap near pelvis were decorated with nacre beads.

The third variant included a costume with decorated collar and belt in the adult’s burial 4 of Decea Muresului. There was the copper grivna on the neck,

while the waist was rounded with the belt with copper beads. The similar costume was found in the adult's burial 7, kurgan 1 of Suvorovo. The neck or collar was decorated with nacre beads, while the same beads were fixed to the belt of shirt lap on pelvis.

The fourth variant was represented in the adult's burial 1 of Petro-Svistunovo. It consisted from decorated neck or collar and arms. There were two rows of copper beads near the neck. The hands were decorated with two bracelets and two beads.

The fifth variant included a costume decorated on the breast and belt or lap. It was found in the child's burial 1 of the Chapli cemetery. The row of 13 copper pendants in the form of shells with holes was found near his breast. The row of circular nacre beads and some copper beads lay near the pelvis.

The sixth variant of a costume with the decorated belt and arm was represented in the woman's burial 15 of Decea Muresului. The belt from 100 nacre beads was found on her waist. The same beads (near 30-40 pieces) lay near the left wrist.

The seventh variant of a costume was decorated only on the breast. It was represented in the adult's burial 1 of Gonova Mogila. The copper beads lay on the breast.

The eighth variant, which was the most widespread, included the costume with the decorated belt. It was represented in the adult's burial 3 of Decea Muresului with the belt from 308-310 copper beads on the waist, as well as in young man's burial 11, in adult's burials 6 and 13, child burial 7 of the same cemetery. The belts from nacre beads were on the waists in the children's burials 2a and 4a of Chapli cemetery. It should be mentioned interesting disposition of the belt with nacre beads in the adult's burial 12 of Decea Muresului. The convoluted belt with a length of 120 cm was found near the right cannon bone in that burial.

I consider the wide distribution of costumes with decorated belt as the specifics of the second period.

Grave goods

The inventory of the second period includes microblades, medium and large flint blades, bifacial points, a scraper, copper wares (awls, adzes and crowbar), a deer horn with the hole, pestle and a piece of coal.

The microblades were found in two burials: the burial 7 of Decea Muresului and burial of Reka Devna.

The medium blades accompanied 15 skeletons: the burial 1a of Chapli cemetery, burials 1, 4, 9 and 11 of Decea Muresului, Kainary, Lugoch, burial 2 of Novodanilovka, burials 1 and 2 of Petro-Svistunovo, Reka Devna, burials 7a and 7b of Suvorovo. The medium blades were also found in the burials 8 and 11 of Igren cemetery (the second-third periods).

The large blades and their fragments were discovered in the 11 burials: the burials 1a, 2a and 3a of Chapli cemetery, burials 3, 12, 14 and 15 of Decea Muresului, burial 1 of Gonova Mogila, burial 7 in kurgan 8 of Kut, Niznyi Rogachik, burial 2 of Novodanilovka. They also accompanied the burials 10, 16 and 17 of the Igren cemetery (the second-third periods).

Some regularities in the location of the large and medium blades in the burials are traced. They lay near the hand or on the belt. There were the large blades on the belt and far from the hands in the burials of adults (burial 7 in kurgan 8 of Kut, Niznyi Rogachik, burial 3a of Chapli, burial 12 of Decea Muresului) as well as the microblade in the child's burial 7 of Decea Muresului. The fragment of the large blade, perhaps, also lay near the belt of the adult from the burial 1 of Gonova Mogila. This location is also typical for the Igren cemetery (the second-the third period), where the medium blade lay on the belt

of the adult in the burial 11, while the large blades were found near the belts of adults from the burials 10 and 16.

The medium blades lay in the hands or near them in the burials of adults (the burial 7a in kurgan 1 of Suvorovo; burials 1, 4 and 11 of Decea Muresului, burial 8 of Igren) and child (the burial 9 of Decea Muresului). The large blades were found in the hand of child from the burial 2a of Chapli and in the hand of adult from burial 3 of Decea Muresului. Two blades (large and medium) lay near the hands of the child from the burial 1a of Chapli.

The blades often lay near the upper part of the body: to the left from the scull in the burial 1 of Petro-Svistunovo, to the right from the scull in the burial 3 of Igren, near the right clavicle in the burial 7a, kurgan 1 of Suvorovo, near the right humeral bone in the burial 11 of the Igren cemetery.

Only two adult's burials are known, in which the fragments of medium blades were found near legs (burial 14 and 15 of Decea Muresului).

The blades, which lay in the hand or on the belt, were the only flint finds in the some burials (burials 2 and 3 of the Chapli cemetery, burial 1 of Gonova Mogila, burials 1, 3, 4, 7, 9, 11, 12, 14 and 15 of Decea Muresului, burials 8, 10 and 16 of the Igren cemetery, burial 7 in kurgan 8 of Kut, Niznyi Rogachik, burial 7a in kurgan 1 of Suvorovo, Lugoch. But some burials had more numerous flint complexes:

1. Two blades in the adult's burial 11 and man's burial 2 (1986 year) of the Igren cemetery; the child's burial 1a of the Chapli cemetery.

2. Fifteen blades in the adult's burial 2 of Novodanilovka.

3. Three blades in the man's burial 3 of the Igren cemetery.

4. The blade and two points in the adult's burial 17 of the Igren cemetery.

5. The blade and four points in the adult's burial 2 of Petro-Svistunovo.

6. Twenty-seven blades and five points in the adult's burial of Reka Devna.

7. The blade and three axes from the adult's burial 1 of Petro-Svistunovo.

8. Two blades and scraper on blade in the adult's burial 7a, kurgan 1 of Suvorovo.

The scrapers were found in two adult's burial: above the right shoulder of skeleton in the burial 5 of Decea Muresului and to the left from the belt and left hand in the burial 7a, kurgan 1 of Suvorovo.

There was a directional core of circular chipping in the burial of Kainary.

A flake with a retouch was found in the adult's burial 18 of the Igren cemetery (the second - third periods).

Woodworking tools were represented with the three flint axes, which were found near the adult in the burial 1 of Petro-Svistunovo and three copper adzes from the Reka Devna.

The burial 7 in kurgan 1 of Suvorovo was accompanied with the piece of **coal**.

Copper awls were often found in the grave goods. They accompanied adults from the burial 7 in kurgan 1 of Suvorovo, burials 10, 11, 13, 14 and 15 of Decea Muresului, Lugoch. They lay, mainly, on the belt or near the lower part of body.

There were the copper **crowbars** in the Kainary and Reka Devna.

A **bone hammer** was found to the left from the child's head in the burial 1a of the Chapli cemetery. There was a **boar fang** without holes to the right of his head.

Pottery accompanied 13 burials: the vessel of the Early Eneolithic of Northern Caucasus in Novodanilovka, fragmented Tripolye vessel in Kainary, fragmented the Sredniy Stog culture vessel in the burial 15 of the Igren cemetery. Pots of the Tisapolgar culture accompanied 10 burials of Decea Muresului. The vessels were found near the steps in the half of burials.

Weapons accompanied only adult's burials: two dart heads in the burial 17 of the Igren cemetery, four points in the burial 2 of Petro-Svistunovo and five ones from the burial of Reka Devna. All dart heads had triangular form with the straight and bulging basements. Their location is known only for the burial 17 of the Igren cemetery, where they were found near the right cannon-bone and on the breast.

Three burials had **symbols of power**. The stone mace lay near the right thigh of adult from the burial 12 of Decea Muresului. The stone scepter was found near the left shoulder of adult from the burial 33 of Kulevcha. Another stone scepter lay on the pelvis of adult from the burial 7 in kurgan 1 of Suvorovo.

5.2.2.3. The third period

The burial 1 of the Igren cemetery, the burials of Falciu in Romania and the burial in the kurgan near village Vinogradnoe have been known for the third period. The burial pits had rectangular (burial 2 of Falciu) and oval shapes (burial 15 in kurgan 3 of Vinogradnoe). The burial 2 from Igren cemetery (1986 year) related to the second or third period. It was made in the pit, which form was similar to the triangle.

There was a ditch around the burial 15 in kurgan 3 of Vinogradnoe.

Stone constructions were still used in the funeral rite. The stone group was found above the burial 1 of Igren.

Ochre was also used in the funeral rite. The ochre was not mentioned only in the description of burial 1 of the Igren cemetery.

The tradition of **funeral feasts** was preserved during the third period. Remains of the broken pottery in ditch around the burial 15 in kurgan 3 of Vinogradnoe testified it.

The skeletons lay flexed on the backs (burials 1-3 in Falciu) or in semisitting position (burial 15 in kurgan 3 of Vinogradnoe) or stretched out on the back (the burial 1 of the Igren cemetery).

The skeletons were oriented to the east. Study of the sun seasonal deviation shows, that the burials were made during warm seasons of years.

Funeral clothes

Any decorated clothes of the third period have not been known. We have some data only for the burials of the Igren cemetery, which I related to the second - third periods.

The first variant of costume is represented in the child's burial 5 of the Igren cemetery. It had decorated head-dress with twenty bone beads.

The second variant includes costume with decorated arms in the adult's burial 10 of Igren. The bracelet from seven bone beads lay on the left wrist.

Grave goods

Not numerous grave goods include the fragment of horn, flint flake and blade in the burial 15 in kurgan 3 of Vinogradny. The blade lay on the right part of the body near the belt. Five fragments of the blades; two flint points; flint, stone and copper axes accompanied the adult's burial of Falciu. The vessels were found in the burial 1 of the Igren cemetery.

Conclusion

Thus the study of the archeological materials shows an evolution of two variants of the Sredniy Stog culture. Nowadays the first period of western variant and the third periods of both variants are not sufficiently investigated, because only a few monuments have been excavated.

The monuments of eastern variant were situated in the Kalmius-Don interfluve, as well as in the Severskiy Donets basin. Ceramics ornamented with drawn lines, which were added with strokes and/or comb imprints, polished stone tools and gradual transition from the tools on blades to the tools on flakes are typical for them. The burials included the skeletons, which lay flexed on the back, and one cremation. The flint artifacts, especially tools and flakes, are numerous in the grave goods. The adornments from bone and horn (beads, plates, braids, pendants, pectorals) are typical for the decoration of funeral clothes.

The monuments of western variant are located in the steppe between the Kalmius and Dnieper rivers. Ceramics, ornamented with strokes and their combinations with drawn lines, is typical for the second period. Comb imprints dominated in pottery ornamentation at the settlements of the third period. Tools were made, mainly, on blades. The burials included the skeletons, which lay flexed on the back, rare were sitting or stretched out on the back. In comparison with eastern variant the flint artifacts and woodworking tools were less numerous in the grave goods.

Some distinctions are traced in the funeral clothes of two variants. The bone beads and pectorals were typical for adornments of eastern variant, and they were not numerous in the burials of western region. The plate-braids from boar fangs, pendants from deer teeth and stone beads decorated the costumes of eastern variant and have not been known among the adornments in western region.

As a whole, lesser diversity and larger standardization are typical for the costumes of western variant of the Sredniy Stog culture, then for the funeral clothes of eastern variant. We can explain this fact with the small number of burials known for the first period. But, the materials of the second period show seven variants of the funeral clothes for western variant, among which only one costume with decorated belt was widespread, instead of nine variants in eastern region. Another specific feature of western variant was represented with the belts from numerous nacre beads, which were not typical for the costumes of eastern variant.

There are also some differences in age-sex affixments of the funeral clothes between two variants. If costumes with numerous decorated details are typical for the children in the burials of eastern variant, so the majority of children of western variant had only one decorated element of the funeral clothes - the belt.

We can also trace another chronological regularity in the decorated elements of the funeral clothes. For example, the decorated belts, which were typical for the first period of eastern variant, disappeared during the second period, while in western variant they were widespread during the second period.

The specificity of western and eastern variants of the Sredniy Stog culture was determined by their origins and environment. These questions would be analyzed in the next chapters.

CHAPTER 6. ORIGIN OF SREDNIY STOG CULTURE, ITS NATURAL ENVIROMENT AND CULTURAL SURROUNDINGS

The general characteristic of culture and determination of its age allow me to analyze contacts of the Sredniy Stog population with other inhabitants of south of the Eastern Europe and make some assumptions about its origins. It should be noted, that changes of natural-climatic conditions played an important role in formation and development of the Sredniy Stog culture.

6.1. NATURAL-CLIMATIC CONDITIONS OF THE PONTIC STEPPE IN THE EARLY ENEOLITHIC

The Sredniy Stog culture occupied the steppe from the Dnieper to the Don. The basic source for researching the climate and landscape in the examining region is palynological analysis of samples from the ancient settlements and bogs. A detailed scheme of climatic and landscape changes during the last 10.000 years in the Eastern Europe was developed (Спиридонова, Лаврушин 1997). Its data shows that the essential aridity of climate took place for about 6400 BP with a culmination near 6300 BP, after which the gradual humidifying of climate began. However the climate was drier than now, because northern zone of steppe located in modern forest-steppe areas before the beginning of Sub-Boreal period about 4500 BP, when the border between the steppe and forest-steppe zone came the same with the modern one.

In the north of steppe zone motley grass and cereal steppes had been distributed about for 6400-6000 BP. In the south of steppe zone there was cereal and wormwood steppes at that time with the involvement of goosefoot steppes. Conditions close to semi-deserted were established about 6400-6250 BP in some south regions. The short peak of humidifying took place for about 6050-5950 BP with the following, short-term aridity, which maximum is dated to 5800 BP. After 5800 BP the gradual humidifying of climate began, which continued up to 5500 BP, when the frontier between the steppe and forest-steppe has come close to modern, but, however, the climate was a slightly drier. In that time the motley grass and cereal steppes were distributed in the steppe zone, and about 5900-5700 BP in the south of eastern part of steppe zone the conditions close to semi-deserted are established.

The following aridity of climate with the peak near 5250 BP began after 5500 BP. It was replaced with the moistening, which maximum is dated about 4500 BP. But we trace the conditions, which were similar to the semi-desert, in the south of steppe till 5300 to 4400 BP, while the northern border of the steppe was situated in the south of the modern forest-steppe region.

Thus, during 6500 – 5000 BP several periods of fluctuation of humidity were traced, which resulted in the changing of landscapes in the steppe zone. During climate's humidity, which was fixed about 6600 – 6400 BP, 6100-5900 BP and 5700-5500 BP, the flood-plain forests in the south of steppe zone were distributed as well as the amount of motley grass in structure of grassy vegetation increased. During the periods of aridity, marked about 6400 – 6100 BP, 5900 – 5700 BP and 5500-5200 BP, the forests in the south of steppe zone disappeared, whereas the role of motley grass decreased and the number of wormwood grew in the structure of grassy vegetation. An interesting situation is fixed about 5500 BP, when the period of moistening caused the maximum approach of the southern border of forest-steppe to the modern one, but on the south of the steppe the distribution of vegetation, which was close to the semi-desert, is traced about 5600-5450 BP.

The steppe zone is characterized by the constant deficiency of humidity. As a whole, the dryness in the southern areas of steppe is six times as large as that for the northern areas in the terms of amount of precipitation that falls

out and its evaporation depending on temperature and strength of wind. The vegetative cover of steppe determining by climatic conditions is also varied. The stocks of phytomass is increasing from the northern limits of steppe to its middle ones of 28 tons up to 48 tons for hectare and are reduced up to 9 tons on its southern limits. The center of steppe zone is optimum on a combination of heat and sufficient amount of precipitation (Мордкович 1982, с.26-29).

The summer drought connected with the falling of basic amount of precipitation in the spring and the autumn belongs to the feature of steppes from the Dniester to the Don. Here, in comparison with more eastern areas, there are a lot of plants mesophytes and not so many xerophyts with big underground phytomass. This makes the North Black Sea steppe more vulnerable and easily reacting on the climatic changes. The small amount of xerophyts with the advanced root system cannot prevent rooting of wood vegetation. With the increasing of humidity this promotes to easy access of trees to the steppe territories and to expansion of forest-steppe zone in the southern direction (Мордкович 1982, с.56).

Steppes from the Don to the Ural are characterized by the greater dryness. Climate aridity was resulted there in desertification of southern areas and during the periods of humidifying the wood vegetation has not penetrated far in the south. Taking into account the landscape specificity of the steppes in Eastern Europe as well as the climatic changes, which took place at the end of the Neolithic – the beginning of the Eneolithic, it is possible to reconstruct a historical situation in this region.

6.2. THE ORIGIN OF THE SREDNIY STOG CULTURE

The formation of the Sredniy Stog culture was a complicated process and its variants had specific features of the genesis.

6.2.1. Formation of eastern variant

During the Late Neolithic period the sites of Surkaya (the Enakievo settlement) and Lower Don cultures (the second and third layers of Razdorskoe, Samsonovka, the second-fifth layers of Rakushechniy Jar, the Neolithic parts of Mariupol and Karataevo cemeteries) were distributed in the Kalmius-Don interfluve. The lowest layer of the Razdolnoe site in the basin of Kalmius is represented with the syncretic Surskaja-Lower Don materials (Kotova 2003, fig.77). Influence of the Surskaja culture traditions, which is traced on the ceramics from the third layer of Razdorskoe, also testifies the close interactions between the Surskaja and Lower Don population. The Surskaja culture influence resulted in a distribution of oval strokes and crimped rim on the pottery of the Lower Don culture.

Nowadays the oldest settlements of the Sredniy Stog culture have been known in the Lower Don and Kalmius basins (Razdorskoe, Razdolnoe, fig.2). Here the oldest Mariupol and Karataevo cemeteries also located, where the Eneolithic burials situated near the Neolithic ones and had common types of adornments. On the basis of these facts it is possible to assume that the Don-Kalmius interfluve was the place of origin the Sredniy Stog culture. Probably, the long coexistence of the population of Surskaja and Lower Don cultures has led to the blending of traditions and formation a new culture on their basis.

From the technological point of view using the pounded shell as the admixture unifies the Early Sredniy Stog pottery with ceramics the Lower Don culture, while for the Surskaja culture is typical an application of several kinds of impurities: sand, shell, vegetative remains as well as a combination of these inclusions. Many of the Sredniy Stog vessels have such Lower Don feature

as hatching of their internal surface with comb stamps in horizontal direction. However the insignificant part of pottery was made in typical Surskaja manner, when its internal surface was made smooth.

Such details of the early Sredniy Stog vessels as pointed bottom and low, sometimes fluted neck have been borrowed from the Surskaja traditions (fig.144: 13, fig.145: 1, 6, 7). For the Lower Don culture the flat-bottomed pottery with oblique inward rim or with a collar is typical (fig.144: 1-8). A few collars on the old pottery of the Sredniy Stog culture are originated from the Lower Don ceramics as well as the form of body with the maximal diameter in its middle part (fig.36: 1).

Addressing to ornamentation, it should be noted that the common features of the Lower Don and old Sredniy Stog pottery are represented by the short comb prints, sometimes “walking comb”, incised lines and the decoration of the internal side of rim. However, the Surskaja traditions are reflected most clearly in the old Sredniy Stog decoration. Among them are the oval and triangular strokes, pits, incised lines as well as combinations of these elements (fig.145). The decoration of rim’s cut with strokes and notches also belongs to the Surskaja trace.

The stratigraphical position of the oldest Sredniy Stog materials is also important, too. So, at the Razdolnoe site the oldest Sredniy Stog layer overlaid a cultural stratum with the mixed Surskaja-Lower Don materials and at the Razdorskoe settlement the same Sredniy Stog layer laid above the stratum with remains of the second period of Lower Don culture.

It is interesting, that a lot of pots with the collar and comb imprints, as well as the vessels with flat bottom (fig.36: 37, 39) are numerous among the oldest Sredniy Stog pottery in the Kalmius and Don basins, where in the Later Neolithic the monuments of Lower Don culture dominated and only the separate sites of Surskaja culture are known. The pottery with the strokes ornamentation, which is typical for the Surskaja culture, are dominated and only a few pots with the collar rim (fig.5-8, рис.32) are known in the Molochnaya-Dnieper interfluve - the native territory of Surskaja population.

The common features in funeral rite testify the connection between the Sredniy Stog and the Lower Don cultures, too. Latitudinal orientation of the skeletons, the ochre and fire (a cremation and coals in grave) in burial ritual are typical for the Lower Don culture.

It is assumed that one of the basic distinctions between the Eneolithic and the Neolithic funeral rites consists in replacement of collective cemeteries by individual burials (Рассамакін 1997: 276). In my opinion, these differences are overestimated. The burials of the Lower Don culture and the first period of Azov-Dnieper culture were arranged in the individual pits, which formed rows (Kotova 2003). Long functioning of cemetery (probably about 300 years) caused closely spaced placement of skeletons, overlaying and destruction of the oldest burials with younger ones. The Eneolithic cemeteries functioned during shorter period of time and belonged to the small group of people. These factors have determined a rarity of burials, were arranged in individual pits.

The important element of similarity between the oldest Sredniy Stog and the Lower Don cultures is the common ornamentation of funeral clothes: plates from bone and boar fangs, teeth of animals, nacre and bone beads, sea shells with an hole (fig.146). Such elements of grave goods, as tubules, bone borers, “clasps” were also common (fig.146: 5-7, 23-25).

The oldest Sredniy Stog flint complex is similar to the complex of the Lower Don culture (fig.147). If the Surskaja population mainly used the middle and microlithic blades for the tools manufacturing, the bearers of Lower Don culture widely applied the large and middle blades for that purpose. They produced them from conic and cylindrical cores (fig.148: 28, 29). As the oldest Sredniy Stog population they made the same set of instruments from those blades. Weapons of the Lower Don population were represented with the bifacial points

having the triangle form with straight or slightly convex basis, as the points of the first and second periods of Sredniy Stog culture (fig.148: 12, 13, 26, 27). A set of woodworking instruments of the Sredniy Stog culture is similar to the Lower Don one: the flint bifacial axes, sometimes having polished edge, the polishing axes and adzes from slate (fig.148: 1-5, 15-19).

Thus, if the oldest Sredniy Stog pottery is best demonstrated the continuity of Surskaja traditions (point bottom, low, sometimes fluted neck, smoothly profiled pots, stroked and incised-stroked decoration), so the set of tools and weapons, together with nacre and bone beads, as well as some elements of funeral rite copied the complex of the Lower Don culture. These data precisely limit the territory of the formation of Sredniy Stog culture with the steppe between the Don and Kalmius.

An innovation of the Early Eneolithic was the flexed position of the skeletons, which changed the supine position typical for the Lower Don and Azov-Dnieper cultures. The emergence of burials in flexed position may be considered as a borrowing from the population of the Balkan-Carpathian region (Манзура 2000). It took place in the beginning of the contacts between steppe population and inhabitants of the Balkan-Carpathian region, which coincided with the formation of Sredniy Stog culture. The population of new culture tended sharply to oppose itself to old canons, including the change of deceased position in the burials.

The radiocarbon dates obtained for the sites of Late Neolithic show that the Lower Don and Surskaja cultures finished their existences in the Kalmius-Don interfluve about 5300 BC (Kotova 2003). Just at the same time the climatic aridity with peak about 5200 BC began and worsened the inhabiting conditions in the south of steppe zone. It had a negative effect on the traditional way of life of the Lower Don and Surskaja population and gave an impetus to the formation on the basis of their traditions the new Sredniy Stog culture.

6.2.2. Formation of western variant

For the understanding of formation of western variant of the Sredniy Stog culture it is necessary to analyze the cultural situation in the Kalmius-Dnieper interfluve about 5300-5100 BC. In that region the cultural changes caused by the climate aridity began a little later than in the Don-Kalmius interfluve and coincided with the peak of aridity about 5200 BC. It was determined by the wetter climate in western regions of steppe zone, which softened the beginning of aridity, and radical changes in culture of local population was absent. Probably, during 5350-5250 BC the late sites of stage 1b the first period of Azov-Dnieper culture existed in that region in parallel with sites of the oldest Sredniy Stog culture in the Don-Kalmius interfluve.

The peak of aridity about 5200 BC coincided with transition from the first period of Azov-Dnieper culture to the second period. Cultural traditions of the second period of Azov-Dnieper culture included a significant component of the Kiev-Cherkassy culture of Dnieper-Donetsk cultural-historical area. In pottery it was showed in distribution of biconical vessels, stroked and incised decoration, which replaced the body-rounded vessels decorated with comb imprints (fig.8: 2, 3, 7, 14, 15). In the flint complex low trapezes and numerous tools on flakes appeared (fig.8: 11). These features emerged as a result of close interactions between the steppe Azov-Dnieper population and the Dnieper-Donetsk inhabitants of the south of forest-steppe Dnieper basin. It is possible to assume, that the gradual aridity of climate, which begun about 5350 BC forced the main part of the Azov-Dnieper inhabitants to migrate from the south of steppe zone to the north of steppe and in the southern forest-steppe areas, which were occupied by the population of the Kiev-Cherkassy culture of Dnieper-Donetsk cultural-historical area.

On this territory some part of Azov-Dnieper population already dwelled, which separate groups had penetrated there earlier. Materials of settlements in the Samara-Orel interfluve (Osipovka-pljazh, Osipovka-liman, Turova-Gora, etc.) testify it and include besides the pottery of the Kiev-Cherkassy culture the ceramics with Azov-Dnieper elements (with collar rims or with “walking comb” imprints) and the typical Azov-Dnieper vessels.

Their contacts with the local Kiev-Cherkassy population have caused the appearance of peripheral syncretic cultural complex (Котова 1994; Kotova 2003). Its ceramics differed from the southern Azov-Dnieper ones by the pits under the rims, whereas the funeral rite distinguished by a less using of ochre. The study of the Neolithic Dereivka cemetery, which burials were arranged according to the Azov-Dnieper and the Kiev-Cherkassy burial traditions, allowed me to assume, that on border of modern steppe and forest-steppe in the Dnieper basin the communities including representatives of the Azov-Dnieper and Kiev-Cherkassy population dwelled. At the same time, quantity of the Azov-Dnieper population in the southern communities was higher than in the northern ones (Kotova 2003).

The existence of such communities on the modern frontier of steppe and forest-steppe zone, in certain degree, facilitated the migration of new Azov-Dnieper groups from south steppe after the beginning of drought period. Increase of the number of immigrants demanded maintenance of peaceful relations with the local Kiev-Cherkassy inhabitants. Such interrelations become stronger, first of all, because of mixed marriages, when the establishment of the relationship through marriage intensified the connections of different cultural groups.

It is traditionally believed that most often women produced ceramics in household conditions. Therefore the hypothesis about mixed marriages with the Kiev-Cherkassy population well explains the changes, which took place during the transition from the first period of the Azov-Dnieper culture to the second one: distribution of the Kiev-Cherkassy decoration, forms of ceramics and admixture of sand along with conservation of the basic features of the Azov-Dnieper burial rite and ornaments of funeral clothes. It is not improbable that the assimilation of part of the Kiev-Cherkassy population also took place, which could explain distribution of low trapezes and decrease of using the large blades in the flint complex of the second period of Azov-Dnieper culture.

But it is possible to explain the diminution of size of the flint tools by draught and a migration of a part of Azov-Dnieper population from the south of the steppe, which disrupted traditional exchange between the Azov-Dnieper population and inhabitants of the Severskiy Donets, where qualitative gray-brown transparent flint was mined during the first period of Azov-Dnieper culture. Shortening of quantity of raw material could cause the transition to the less qualitative local flint and the reduction of size of the tools.

In spite of the considerable migration to the modern northern steppe, separate groups of the Azov-Dnieper population staying in the steppe between the Kalmius and the Dnieper adapted to the growing dryness of climate. Radiocarbon dates of second layer of Semenovka and the second ceramic layer of the Kamennaya Mogila testified that the Azov-Dnieper population continued to live in the Molochnaya basin about 5300-5100 BC (Table 16). It is interesting, that the influence of the Dnieper-Donetsk traditions in Azov-Dnieper ceramics of this region was lesser in comparison with steppe Dnieper area and ornamentation of previous time (ribbons filled with comb prints) preserved partly (fig.38: 2).

The fate of the Surskaja culture population, which dwelled in the Kalmius-Dnieper interfluve, was different. Their sites disappeared after the peak of aridity about 5250 BC. Stratigraphically the layer of the Late Surskaja culture at the Strilcha Skelja settlement was overlaid with the layer of second period of the Azov-Dnieper culture. The Surskaja materials with features of influence of the second period of the Azov-Dnieper culture were absent. It is possible to assume, that aridity about 5300 BC weakened the Surskaja communities and they dissolved among the bearers of Azov-Dnieper and Kiev-Cherkassy cultures.

About 5000 BC the insignificant humidity of climate with peak about 4900 BC began. Conditions of dwelling of people in the south of steppe zone improved, that, probably, caused growth of number of its inhabitants. In that time the old Sredniy Stog population migrated to the west in the steppe Dnieper area, where the first Sredniy Stog cemetery (Krivoy Rog) and separate flexed skeleton on the territory of the late Azov-Dnieper cemetery (Nikolskiy) appeared. Radiocarbon dates for the grave 3 of Krivoy Rog show its younger age (about 200 years) in comparison with the oldest cemeteries of eastern variant.

Nowadays the settlements of the first period of Sredniy Stog culture are not known in the Kalmius-Dnieper interfluve. But due to the fact, that the oldest Eneolithic settlements are very rare as a whole, and they have been found only casually because of great depth of cultural layer, their existence could be assumed. If the oldest cemetery has been discovered, the synchronous settlements had to exist, because usually cemeteries located near them. Distances between the sites and ground burials usually were about 500-800 m. The radiocarbon dates of the Krivoy Rog cemetery show, that the Sredniy Stog population already inhabited in the steppe Dnieper basin about 5050-4900 BC.

The migration of Sredniy Stog population pressed, but not annihilated the bearers of the Late Azov-Dnieper culture. In the certain degree these two groups of the population were related. The Azov-Dnieper culture was formed on the basis of traditions of the first period of Lower Don culture with the influence of traditions of Surskaja culture, when in the Middle Neolithic the separate groups of Lower Don population moved to the steppe Dnieper basin and began to live in surrounding of native inhabitants of that region – the bearers of Surskaja culture (Kotova 2003). Thus, the Sredniy Stog and Azov-Dnieper cultures had some common components in their structures: the traditions of the Surskaja and Lower Don cultures. The Azov-Dnieper culture formed in the steppe Dnieper basin on the bases of the second period of Surskaja and the first period of Lower Don cultures, whereas the Sredniy Stog culture originated between the Don and Kalmius from the bearers of second period of the Lower Don culture and the third period of Surskaja culture. The kinship of the Azov-Dnieper and Sredniy Stog cultures promoted to close contacts and gradual assimilation of the Azov-Dnieper population.

The radiocarbon dates and archaeological materials evidence for the coexistence of Sredniy Stog and Azov-Dnieper population in the Dnieper region about 5050-4800 BC. Among the grave goods of the second period of Azov-Dnieper culture there are plates from boar fangs with cuttings on narrow edges and decoration from notches (fig.149: 6). They are similar to the plates from the Sredniy Stog culture burials of Mariupol cemetery. In pits D and E of the Nikolskiy cemetery supine skeletons have been found together with interments in flexed position on back, that were buried according to the Sredniy Stog funeral rite. If in the pit D the flexed skeleton was buried one of the latest, then in the pit E the flexed burials 125 and, probably, 120 lay together with supine skeletons.

The use of cremation in burial rite is common to the second period of Azov-Dnieper culture (the Lysogorskiy cemetery, pit 5) and the oldest Sredniy Stog culture (the Mariupol cemetery). It is interesting, that the cremation belonged to the youngest burials of the Lysogorskiy cemetery. It overlaid a pit 4 with date 5890±70 BP (Kotova 2003). Hence, both the pit 4 and pit 5 with cremation were synchronous to the sites of the first period of Sredniy Stog culture.

Gradual assimilation of the Azov-Dnieper population coming to the end about 4700 BC is testified by the stratigraphy of settlements. Cultural layers with materials of the second period of Azov-Dnieper culture at the four settlements have been overlaid with the layers of second period of Sredniy Stog culture: Strilcha Skelja, Sredniy Stog, Semenovka, Kamennaya Mogila 1.

Thus the western variant of the Sredniy Stog culture formed on the traditions of eastern variant migrants under the influence of the second period

of the Azov-Dnieper culture. Judging from the wide spreading of the pottery without collars in ceramic assemblage of western variant and complicated decoration with wide use of strokes it is possible to assume the assimilation of small groups of the Surskaja population, which lived in the Dnieper region till the appearance of the first Sredniy Stog population.

The influences of Azov-Dnieper traditions were reflected on the funeral rite of Sredniy Stog population. Sacrificial grounds with flint tools, animal bones and ceramics on surface of the cemeteries, which are known in the Sredniy Stog ones (Chapli, Giurgiulesti), are typical for the Azov-Dnieper culture.

The problem of the wide use of stone in the funeral rite of steppe Early Eneolithic population of Eastern Europe represents the separate and complicated question. Stone slabs and other stone funeral constructions appeared simultaneously among the population of Azov-Dnieper, Sredniy Stog and Khvalynsk cultures. Separate stones on the cemetery surfaces are known for the first period of Azov-Dnieper culture (the Middle Neolithic), therefore it is possible to assume, that the stone slabs have appeared in the cemeteries of the second period of Azov-Dnieper culture as a result of further development of its traditions and then were borrowed by the Sredniy Stog and Khvalynsk population. The idea of wider use of the stone in funeral practice (facing pits with stone, creation of tombs) has got development already in their environment.

However the other assumption, that all three cultures simultaneously borrowed idea of creation of stone slabs, tombs and cromlechs from the western Eneolithic population, separate groups of which penetrated to Ukraine, has the right to coexistence as well. This point of view is shared by I.V.Manzura, who emphasizes, that the grave pits fenced and covered with stones are known in the Neolithic and were widely used in the Early Eneolithic of Bulgaria (Манзура 2000).

It is possible that the burials in pits with projections along the walls (Krivoy Rog) have been also borrowed from the Azov-Dnieper population, and the prototype of catacombs of the Sredniy Stog culture (the graves 9 and 30 Mukhin 2; Giurgiulesti Giurgiuleşti) were the pits with alcoves. Similar constructions are known in cemeteries of the second period of Azov-Dnieper culture (the pit 5 of the Lysogorskiy cemetery, the pits D, Е, З of the Nikolskiy cemetery) (Котова 1994, с.41).

However, probably, that the Azov-Dnieper and Sredniy Stog population borrowed these funeral constructions from the inhabitants of Balkan-Carpathian region. According to I.V.Manzura, pits with alcoves are known in the west and south-east Europe since the Neolithic (Манзура 2000).

There is an important question, concerning the origin of ceramic complex of third period of western variant of the Sredniy Stog culture. Oblique inward rim, high grooved neck, maximum diameter in the upper third of body, comb imprints, including the use of long comb stamp, and the disposition of ornamentation in the upper part of neck are typical for it.

During the analysis of monuments of the second period of this culture I have already mentioned, that in the Dnieper-Kalmius interfluve the separate vessels with the long comb imprints were found only at the Semenovka settlement. But such ornamentation with the grooved neck and oblique inward rim was typical for the ceramics of the fourth and fifth layers of Razdorskoe. Pottery with the comb ornamentation on the Lower Don indicates the genetic connections with the Neolithic traditions and at the same time testifies the contacts with the Khvalynsk population.

I can suppose, that about 4400 BC, when the aridity of climate began, some of the population of eastern variant of Sredniy Stog culture settled to the west in the Dnieper-Kalmius interfluve, where dehydration of climate was not so harsh. It was connected with lesser continentality of western region of the Eastern Europe steppe. I can’t exclude, that worsening of living conditions in the steppe Don area caused the strengthening of relations, including conjugal

ties, among the population of western and eastern variants. Those relations were very important especially for the emigrants of eastern variant of the Sredniy Stog culture, who lived in the new surroundings.

It is possible, that some women of eastern variant joined the communities of western variant for the establishment of related ties through the marriage, incorporating the tradition of making pots with oblique inward and ornamented rim, grooved neck and comb ornamentation. The participation of women explains the specific of change of traditions of western variant during the transition from the second period to the third one (radical changes in ceramics and practically unchanged weapon complex, which was made and used by the men).

One of reasons of the wide use of pots with oblique inward rim and with the collars on the necks can be a preservation of traditions of the Late Azov-Dnieper culture, bearers of which were assimilated by the Sredniy Stog population. Vessels with collars and oblique inward rim were typical for that culture, too (fig.149: 1-4).

6.3. SREDNIY STOG CULTURE AND ITS SURROUNDINGS

The problem of interaction of the steppe population with the outside world attracts the great attention of scientists. It is studied on the basis of analysis of different categories of material culture: scepters, adornments, large flint blades, bifacial points and ceramics. But, on my opinion, pottery, as the most numerous materials, which sharply reacted on outside influences, should be the main source of our conclusions. Its study was supplied with the analysis of metal (Рындина 1998) and funeral rite.

6.3.1. Sredniy Stog and Tripolye cultures

Now a lot of facts have allowed me to suppose close contacts between steppe and Tripolye population. Materials of the Bernashevka settlement (Tripolye A – Precucuteni 2) reflect their beginning. There is glossy ceramics with comb ornamentation (fig.125: 1, 4), which is similar to the pottery of the second period of Azov-Dnieper culture (Kotova 2003, fig.7: 1), and the pottery with shell inclusions, which is similar to the Sredniy Stog pottery. This evidence suggests that the inhabitants of Bernashevka had some contacts with the population of Late Azov-Dnieper and Early Sredniy Stog cultures. Solitary ceramics with shell inclusions, drawn and comb ornamentation (fig.125: 9-11) and plates from the bone and nacre (fig.125: 5, 6), which are similar to the Sredniy Stog ones, were found at the Sabatinovka 2 and Luka-Vrublevetskaja sites. It testifies the contacts of the Sredniy Stog population with the bearers of Tripolye culture in the end of Tripolye A (PreCucuteni 3 – Cucuteni A 1-2).

During the period A of the Tripolye culture (about 5450-4750 BC) the Tripolye influence was the most intensive. In caused the acquaintance of the Sredniy Stog and Azov-Dnieper population with the first metal. Some features of the influence of Tripolye culture could be traced in the Sredniy Stog ceramics. The vessel from the fourth layer of Razdorskoe (fig.34: 8) could be the imitation of the Tripolye jars, which were found at Bernashevka (fig.125:8). Their common trace is the vertical neck with the outturned rim, which isn’t typical for the steppe pottery. The pot with the comb ornamentation from the Tzimljanskoe settlement had a line of pinches on a neck, which is typical for the pottery of Tripolye A. It is necessary to note, that the influence of the steppe traditions on the Tripolye culture was minimal during that period.

The contacts of steppe and Tripolye population became more active in the period of Tripolye B I (4750-4500 BC). Ceramics with the Sredniy Stog features were found at Tripolye settlements in the Dniester basin (Verkhnie Zhory,

Vasilevka, Zhury, Drutsy I, Novye Duruitory and others), in the South Bug basin (Sabatinovka I, Berezovskaja HPS) and in the Dnieper-Bug interfluve (Krasnostavka). Some of coarse pottery of these sites has shell admixture (from 1% to 4% of coarse pottery, see Шумова 1994; Палагута 1998) and the ornamentation from drawn lines, strokes and their combinations with comb imprints.

These decorative elements had appeared on the pottery of the Tripolye culture before the contacts with steppe population, but in the B I period they had specific manner, which was typical for the Sredniy Stog ornamentation. The long comb imprints were used in decoration of the Tripolye culture, but the coarse pottery with shell admixture had rows of short and middle comb prints (fig.126: 4), which were similar to the Sredniy Stog ornamentation. The rounded linear composition decorated the pots of the Tripolye culture, but under the steppe influence the angle composition with triangles, trapezium, rectangles (fig.126: 5-7). In the period A of the Tripolye culture oval strokes were used in pottery ornamentation, but under the steppe influence triangular strokes appeared (fig.126: 3, 7).

Imported steppe vessels have not discovered among the coarse pottery of the Tripolye culture. All pots with shell admixture are only imitations of the Sredniy Stog ceramics. For example, some fragments from Krasnostavka, Beresovskaya HPS and Sabatinovka I (the South Bug basin) are unified with the Sredniy Stog pottery by the complex of features: shell inclusions, proportions (rim diameter is smaller than the body diameter) and ornamentation (fig.126: 1, 3, 6). Separate vessels with straight cut rim and rims with ledge outward, which are not typical for the Tripolye culture pots, but widely distributed at the Sredniy Stog ceramics, are known in the Sabatinovka I, too.

Coarse ceramics from the settlements of the period BI in the Dniester basin has got only two similar features with the Sredniy Stog pottery: shells admixture and ornamentation (fig.126: 4). As a whole, the coarse pottery of this region differs from the steppe ceramics in the flat bottom, stocky proportions and the diameter of rim, which is usually larger, than the diameter of body. Only at the Drutsy I settlement the fragment of rounded bottom was found (fig.126: 8). Comb stamp was used for making drawn lines in the ornamentation of Tripolye pottery, but it wasn’t widely distributed in the Sredniy Stog culture.

So, it is obvious, that during the period BI the Tripolye population borrowed from the steppe inhabitants, first at all, shell admixture in clay and such elements (short and middle comb imprints), but saved original form of vessels. The ceramics, which is similar to the Sredniy Stog pottery in whole complex of features, was found only at the Tripolye settlements in the South Bug basin, which is located near to the steppe Dnieper basin.

In the period B I-II of the Tripolye culture the coarse pottery with shell admixture is known at the Soloncheny 2 settlement on the Dniester basin (fig.127; 128). Coarse pottery with the rounded bottom was found there, too. It is interesting, that some vessels with rounded bottom, comb and strokes-linear ornamentation are very similar to steppe ones and differ from they only in the stocky proportions. The presence of the rounded bottoms testifies the direct influence of the steppe population, instead of the development of the previous traditions, because such bottoms did not distribute in the Tripolye pottery.

Coarse ceramics of other settlements of Tripolye B I-II (Kadievtsy, Vesely Kut, Shkarovka, Veremje and others sites), which were, perhaps, younger than the basis complex of Soloncheny 2, had pearls on upper edges of necks and ornamentation from the imprints of multitoothed comb stamps with the drawn lines (fig.129: 1, 2). The imprints of interweaved cord are known at the youngest sites of this period, including short imprints or so-called “caterpillar” (fig.129: 4). The forms and ornamentations of some vessels at the Vesely Kut settlement are similar to the ceramics of Sredniy Stog site (the third period of western variant of Sredniy Stog culture). Appearance of ornamentation from the long comb imprints and interweaved cord, as well as oblique inward rim on the

pottery of the Tripolye culture, could be connected with the influence of Late Sredniy Stog population.

Probably an increase a quantity of pottery with shell admixture at the settlements and the number of sites with such ceramics among the Tripolye monuments testify to the intensification of the contacts between the Sredniy Stog and Tripolye population during the period B I-II of the Tripolye culture.

The Tripolye influence on the traditions of the Sredniy Stog culture was less prominent. During the period of Tripolye B I the main influence of Tripolye population is fixed on the metalworking of steppe inhabitants and reflected only lightly in its ceramics. Steppe population borrowed only the tradition of shoulder ornamentation with the unornamented neck of the vessels from the Tripolye representatives. Such disposition of ornamentation was typical for the pottery of Tripolye B I and ceramics of the most western site of the Sredniy Stog culture - the third layer of Strilcha Skelja. The majority of vessels at the other Sredniy Stog settlements had ornamented necks.

The pots with high neck (about 5 cm) distributed among the coarse ceramics of Tripolye culture in the end of B I and during the B I-II periods. Perhaps, the appearance of such pottery in the youngest sites of the second period of western variant and at the settlements of the third period of the both variants of Sredniy Stog culture was connected with the Tripolye influence. They are typical for Strilcha Skelja, Semenovka, the upper horizon of the fifth layer of Razdorskoe, Alexandria and other settlements.

Studying contacts of steppe and Tripolye population, I can’t agree with the V.A.Dergachev, who supposes, that the relations between steppe population and the bearers of Gumelnitza and Tripolye cultures weren’t peaceful during Tripolye B I period, and all finds with some steppe traces are only mechanical inclusions (Дергачев 1999; 2000). Analysis of the Tripolye coarse ceramics and steppe pottery testifies the opposite. All features of steppe and Tripolye interaction, which were mentioned above, testify the peaceful co-existence and tight contacts of these groups. The coarse ceramics of Tripolye, which had the Sredniy Stog features, was made mainly at the Tripolye settlements, and steppe traditions were reproduced in the Tripolye style. It was impossible if there was any war situation.

So, the study of the monuments shows, that the contacts of steppe and Tripolye population could be fixed from the beginning of Tripolye A and become the most intensive in the B I and B I-II periods. The influence of Tripolye on the Sredniy Stog ceramics traditions was minimal and manifested, mainly, among the population of the most west region – the steppe Dnieper basin. In its turn, the Tripolye population borrowed traditions of making ceramics with shell inclusions, triangular strokes, short and middle comb imprints as a result of prolonged contacts with the steppe neighbors.

There is a point of view about mutually beneficial cooperation (Даниленко, Шмаглій 1972) or exchange, which existed between the Tripolye and steppe population (Телегин 1985, 2000; Рассамакин 1997; Мовша 1998, etc). It is possible, that the distribution of ceramics with the steppe traces in the Tripolye culture was related to the marriages with the Sredniy Stog women (Палагута 1998; Видейко 1999). Those women continued making their usual vessels, adapting them to the Tripolye economy (for example, making the flat bottom and stocky proportions). This suggestion explains the singleness of ceramics with shell inclusions in the period A and gradual increase of its quantity during period B I with the prevailing of typical Tripolye pottery on the settlements. Perhaps, the numbers of Sredniy Stog women and their descendants in the Tripolye communities during period A were very small and gradually increased during B I and B I-II periods. According to the prevailing of coarse pottery with shell inclusions in the southernmost Tripolye settlements, I can suggest, that the greatest number of the Sredniy Stog women lived there.

Basing on the data of steppe sites, where only separate imported Tripolye vessels were found, it is possible to suppose, that there weren't any Tripolye women in steppe communities. But, perhaps, another explanation is most probably. Entering Sredniy Stog communities by the marriage, Tripolye women couldn't make pottery, which would be similar to the Tripolye one because of the lower level of pottery manufacture of steppe population. Steppe population in the Early Eneolithic used only one technique for pottery making. Shell admixture allowed them to use a low-temperature firing on the bonfire or in the pits and so-called "fine" pottery was not known.

The Tripolye population used kilns for the high-temperature firing of ceramics, different inclusions and well-washed clay for making different types of pottery (Цвек 2004). It was impossible to make such complicated processes at the steppe sites. But gradual distribution of pottery with the Tripolye features (high neck, which is typical for Tripolye B I and B I-II ceramics; pots, which rim diameter was larger, than the diameter of body; ornamentation on shoulders with the non-ornamented neck) at the Sredniy Stog sites, especially in the steppe Dnieper basin, allows me to suggest, that the Tripolye women were members of the western variant communities of the Sredniy Stog culture. Perhaps, they tried to make their usual pottery in the conditions of more primitive technology.

Physical anthropology has given some data about the contacts of steppe and Tripolye population. In spite of large numbers of Sredniy Stog burials, anthropologists studied only a few of them. The most detailed investigation was made for the dual burial XXI of Mariupol cemetery (Гохман 1966), burials 9 and 46 of Alexandrovsk (Шепель 1985), the Igren and Giurgiulesti cemeteries, burial in Lugansk and burial near staniza Suvorovskaya (Потехина 1999). The burials in Mariupol, Lugansk, Alexandrovsk, staniza Suvorovskaya and the woman from burial 18 of the Igren cemetery are related to the massive (hypermorphic) Protoeuropoid type.

One of the skeletons of Giurgiulesti belonged to the man, aged 20-25. According to the complex of features it could be related to the mesomorphic variant of Mediterranean type, which occupies an intermediate position between the leptomorphic southern Europoids and hypermorphic Protoeuropoids (Телегин, Нечитайло, Потехина, Панченко 2001). That variant was the result of mixing of the two last anthropological types. The majority of racial-diagnostic features of the skeleton from Giurgiulesti is the most similar to the series of man sculls from the Igren cemetery, which represent the mesomorphic Mediterranean component in the structure of the Sredniy Stog population.

These data testify the assumption about the existence of mixed Tripolye-Sredniy Stog marriages, because Tripolye population represented the Mediterranean anthropological type according to the not numerous Tripolye burials (Потехина 1999, с.154). It is interesting, that the massive Protoeuropoid type was typical for the oldest and the most eastern monuments of Sredniy Stog, while mesomorphic Mediterranean type was typical for the Igren cemetery, which was one of the youngest monuments related to the second and third periods of the Sredniy Stog culture and synchronous to the Tripolye B I and B I-II. The burial in Giurgiulesti belongs to the end of the second period of Sredniy Stog culture, according to the archaeological materials and radiocarbon date. Perhaps, the mixed anthropological type was already formed among the Sredniy Stog population in that time. It appeared as a result of prolonged contacts (more than 800 years) and existed simultaneously with the hypermorphic Protoeuropoid (burial 18 of the Igren cemetery).

It is interesting to trace the dynamics of contacts of the steppe and Tripolye population. They began immediately after the appearance of Tripolye population in Dniester basin (the beginning of period A of the Tripolye culture), when the Late Azov-Dnieper and Early Sredniy Stog population began to interact with it. But, conjugal ties in that period, perhaps, weren't intensive, which is testified by the separate pots with steppe traces at the Tripolye

settlements and not numerous imitations of Tripolye ceramics in the materials of the eastern variant of Sredniy Stog culture.

Taking into account data of the Early Eneolithic cemeteries of the steppe zone, where the first imported metal artifacts were found, I can suggest the existence of prestigious exchange, which played an important role in the relations of Tripolye and steppe population during that period. The Azov-Dnieper and Sredniy Stog population took part in it. The Tripolye population could provide its neighbors with metal (copper and gold) or metal artifacts (the Nikolskiy cemetery of the Azov-Dnieper culture and the Sredniy Stog burials of Mariupol cemetery), bracelets from *Spondylus* shell (the Lysogorskiy cemetery of the Azov-Dnieper culture) and sea shells with holes (Krivoy Rog). Different problems of exchange will be analyzed in the next chapter.

In the end of period A and during B I period of the Tripolye culture the close contacts between the Sredniy Stog and Tripolye population are traced in southern regions of the forest-steppe in the Dniester and South Bug basins and the Dnieper-South Bug interfluve. Perhaps, conjugal ties become the most frequent exactly in that time and caused the distribution of pottery with Tripolye influence at the Sredniy Stog sites in the steppe Dnieper basin and the coarse ceramics with a shell inclusions and drawn-stroke ornamentation at the Tripolye settlements.

Strange as it may seem, the Tripolye population was more interested in contacts, than the steppe inhabitants. They were newcomers, which gradually moved to the east through the forest-steppe area, occupying lands, which were settled by the Bug-Dniester and Kievo-Cherkassy Neolithic population. The Tripolye population needed allies and peaceful relations with the neighbors, especially with those, whose territories were unnecessary for them. Among such neighbors were the bearers of Azov-Dnieper and Sredniy Stog cultures, who occupied other natural-climatic zone, which was useless for the Tripolye population during the Early Eneolithic. Even during the Later Eneolithic and Early Bronze Age they occupied only the steppes in the South Bug basin and to the west of it, staying out of the territories of the Sredniy Stog descendants.

Steppe inhabitants were interested in those contacts, first of all, because it received the copper and tools from them. That metal was obtained through the mediation of Tripolye population and as the result of immediate visits to centers of metallurgy and metalworking of the Balkan-Carpathian metallurgical province. Perhaps, conjugal ties made a pass through the Tripolye territory easier and guaranteed help during exchange expedition. It explains the fact, that ceramics with the Sredniy Stog influence is known practically at all settlements of forest-steppe Dniester basin in the end A and B I periods of Tripolye, while in the basin of South Bug and Bug-Dnieper interfluve this pottery was found rarely, in spite of fact, that this regions is closer to the steppe Dnieper basin, where the Sredniy Stog population lived. The Dniester basin was the important region and the route of the exchange expeditions of steppe population, which went to the Lower Danube or Transylvania for the metal. Therefore it was very important to have relatives there.

In the period B I-II of the Tripolye culture the necessity of contacts with the Tripolye population of Dniester basin become stronger, because in that time metal began to arrive from the Transylvanian and Hungarian mines (Рындина 1998). The growing of quantity of the ceramics with shell inclusions at the settlements of Dniester basin (Виноградова 1983) also testifies the strengthening of ties between the Sredniy Stog and Tripolye cultures. But in the Bug-Dniester interfluve prolonged contacts of the Tripolye and steppe population in that period also caused the strengthening of relations, which resulted in the numerous pottery with the Sredniy Stog influence at the Tripolye settlements (Vladimirovka, Veselyi Kut, Miropolje, etc.) and wide distribution of vessels with some traces of the Tripolye traditions (high necks, which was ornamented on the upper edge) at the sites of Sredniy Stog culture.

6.3.2. The Sredniy Stog culture and monuments of Northern Caucasus

During last decades the relations between the population of Eastern Europe steppe and the Eneolithic inhabitants of Northern Caucasus have been an object of active discussion (Нехаев 1983; 1987; Кореневский, Наглер 1987, etc). The Early Eneolithic settlements of Meshoko-Zamok-Svobodnoe type have been excavated in Northern Caucasus (Кореневский 1998). Pendants from the animal teeth, splintered boar fangs with holes, large flint blades, bifacial points, ceramics with shell admixture and linear ornamentation were found at these sites (fig.150: 20, 21-26). They are considered as the result of influence of the Sredniy Stog and Khvalynsk cultures.

Researchers noted not only the existence of relations of Northern Caucasus population with steppe inhabitants, but also some contacts with the bearers of Tripolye culture (period B I), which were reflected in common types of bone "clasps" and stone bracelets (Нехаев 1987; Мовша 1998, etc).

Besides the settlements of Meshoko-Zamok type the Nalchik cemetery in the Kabardino-Balkaria represents another important source of study of the Early Eneolithic of Northern Caucasus. This monument was excavated in 1923 and 1929-1930 years (Круглов, Пиотровский, Подгаецкий 1941). A question about cultural attribution of the Nalchik cemetery has stayed open for this moment. On S.N.Korenevskiy's opinion, the connection of Eneolithic burials of this monument with the local Northern Caucasus population, which left the settlements of Meshoko-Zamok-Svobodnoe type, is disputable (Кореневский 1998). Some scientists synchronize the Nalchik cemetery with the monuments of Khvalynsk culture, basing on the common elements of inventory (stone bracelets, *Pectunculus* shells with holes, teeth pendants and their imitations, nacre beads), positions of skeletons (flexed on the back and on the side), similar planigraphy of cemetery and presence of small mound (Васильев 1981; Кореневский, Наглер 1987). On I.B.Vasiliev's opinion, an origin of population, which left the Nalchik cemetery, was connected with the population of Mariupol cultural-historical area and he included its cemetery in the circle of monuments, which are close to the Khvalynsk culture (Васильев 1981, p.41).

The Nalchik cemetery had a small mound with height about 0,67 m and diameter near 30 meters. It included, perhaps, burials of different time (Мунчаев 1982, c.130), which were flexed on the right or left side, on the back and only rarely on the belly. The burials were painted with ochre in different degree and some of them were accompanied with the inventory, which consisted of bone and stone adornments, flint artifacts and ceramics. Unfortunately, full analysis of this monument has not made yet, especially fragments of ceramics, which were found in the burials. Separate fragments were found outside burial pits in the "cemetery thickness" as authors of publication wrote. They supposed, that ceramics get to the burials accidentally.

Taking into account different chronological position of the burials, it is possible to determine their exact age only with the help of radiocarbon analysis or comparison of ceramics from burials with the pottery of settlements. Even if fragments of pottery get to the burials accidentally with the soil, which was used for the covering, as authors of publications thought, they should be synchronous or to precede the burial. In any case, the ceramics can give some chronological reference point. Unfortunately, the ceramic analysis has not been published yet, but we have a radiocarbon data for one of the burials, which indicated its age about 5100-4900 BC (Кореневский 2004). This data shows, that the Nalchik cemetery was synchronous to the end of the first period of Sredniy Stog culture.

Before the complex study of the Nalchik cemetery the analysis of publication allows me to suggest, that the oldest burials had inventory, which finds some analogies at the monuments of Khvalynsk and Sredniy Stog cultures, as well as at the settlements of Zamok-Svobodnoe type (burials 36, 41, 42, 44, 45,

46, 53, 57, 60, 83 and, perhaps, burials 4 и 8). Burials with some fragments of ceramics weren't included to that group.

There was a stone group above the burial 4. All skeletons were painted with ochre.

Three burials (4, 46, 83) were flexed on the bellies. Burial 4 was oriented to the south (about 160 degrees; in all cases the orientation was determined taking into account the seasonal deviations of the sun). The burials 46 and 83 were oriented to the west (300 and 260 degrees accordingly).

Four burials were flexed on the right side (8, 53, 57, 60). The skeleton 53 was oriented to the south (125 degrees). Burial 57 was oriented to the north (40 degrees). Burials 8 and 60 were oriented to the east (70 and 75 degrees accordingly).

The burials 41 and 44 were flexed in the left side. The skeleton 41 was oriented to the east, while the burial 44 – to the west.

The burial 36 was flexed on the back with head to the south.

The grave goods included flakes; blades; pendants from the deer teeth, fox and cat fangs; beads from marble, geshir, serpentine and nacre; bone bracelets and rings; plates from boar fangs with the holes; pendants from teeth of cattle and ovicaprids, *Pectunculus* shells with the holes.

The low kurgan mound, subburials and funeral groups, which consisted, perhaps, from the relatives, testify to the affiliation of the cemetery with the settled group of people, which lived not far from the cemetery. Local Early Eneolithic population left the settlements of Agubekovo, Tjalling and Mushtylatulagat type (Кореневский 1998). Unfortunately, only the materials of Agubekovo were published (Кричевский, Курглов 1941). Therefore I can compare materials of the Nalchik cemetery only with the adjacent settlements of Zamok-Svobodnoe type, where the small flint blades and numerous adornments have found some analogies. Among them are the stone bracelets, flat stone bead from serpentinite, nacre beads, bone cylindrical beads, pendants from deer teeth and shells, blades from boar fangs with holes (fig.150: 1-21). It is interesting, that the stone bracelets, which are known in the Nalchik cemetery and sites of Zamok-Svobodnoe type, have not been found at the settlements of Agubekovo, Tjalling and Mushtylatulagat type.

Burials, which are similar to the Nalchik ones, were excavated in the Unakozovskaja cave (Потехина 1995). They were connected with the Eneolithic layer with ceramics of Meshoko-Zamok type (Ловпаче 1992). Skeletons were flexed on the backs in pits with stone facing and were painted with ochre, while grave goods included a stone bracelet, bone borer and flint blades.

All above mentioned Eneolithic burials of Nalchik could be synchronized with the first and the second periods of the Sredniy Stog culture. Besides the radiocarbon data, we can base this synchronization on the plates from boar fangs with the holes, which found analogies in the adornments of Liventsovka, Petro-Svistunovo and Veselaja Rosha. As a whole, that type of adornment appeared in the Lower Don Neolithic culture and distributed among the population of Sredniy Stog and Khvalynsk cultures in the Early Eneolithic and, perhaps, was borrowed by the population of Northern Caucasus.

The pendants from deer teeth of the Nalchik cemetery are similar to the adornments of Karataevo burials. It is interesting, that during the Early Eneolithic in steppe Dnieper-Don interfluve the stone beads are known only in the cemeteries of the second period of Azov-Dnieper culture (5200-4700 DC), the first and the second periods of the eastern variant of Sredniy Stog culture (Staronizhesteblievskaja, Giurgiulesti, Chongrad). So, the adornments of Nalchik are typical to ones from the oldest Eneolithic monuments of steppe, which were synchronous with the Tripolye A and B I.

Before detailed studying of burial rite of the population, which left the sites of Zamok-Svobodnoe type, I can only suggest the relations of the most

ancient burials of the Nalchik cemetery with both the local Early Eneolithic population of Northern Caucasus and population of the mixed Northern Caucasus-Sredniy Stog traditions.

Contacts of the local inhabitants of Northern Caucasus with the population of eastern variant of the Sredniy Stog culture during the first period testify with the materials of burial 29 of Staronizhesteblievskaja, where the beads from jet, which are similar to the finds in the Nalchik cemetery, were found. The burial 18 in kurgan 2 of Komarovo, which was accompanied with the ceramics of Zamok-Svobodnoe type (fig.94: 5), relates to the second period. Perhaps, the contacts of Sredniy Stog and Northern Caucasus population began about 5100-4850 BC. S.N.Korenevskiy synchronized Zamok with Tripolye B I and B I-II, according to the finds of bone “clasps” and plates from boar fangs (Кореневский 1998). But, as I.V.Manzura (Манзура 2000) showed, bone “clasps” were found only at the sites of Tripolye A 2 (PreCucuteni 3) – Tripolye B I (Cucuteni A 3), which also testifies the early age of the Zamok settlement. Taking into account these facts, it is possible to assume, that the settlements of the Zamok-Svobodnoe type already existed about 5100 BC.

The contacts of Northern Caucasus inhabitants with the population of western variant of the Sredniy Stog culture took place, too. According to the imported Northern Caucasus vessel from the Novodanilovka burial (the second period of the Sredniy Stog culture), those contacts began about 4800 BC. They existed even after that time. The sherds with bulbs or pearls on the upper edge of the vessels at the settlements of the third period of in the Dnieper basin testify it. At the same time some vessels with the pearls and glossy ceramics without ornamentation appeared in the fifth layer of Razdorskoe site (eastern variant of the Sredniy Stog culture).

Not numerous pots with pearl ornamentation are known among the Tripolye coarse ceramics in the beginning of period B I-B II, and pearl decoration became widely distributed in the end of that period. Possibility of borrowing of pearls ornamentation from the Northern Caucasus inhabitants by the Tripolye population was suggested by T.G.Movsha (Мовша 1998). Really, the distribution of pearls in the Sredniy Stog and Tripolye cultures were connected with the influence of Early Eneolithic population of Northern Caucasus. Their allocation on the upper edge of neck and puttying of holes from inside, which are typical for Northern Caucasus ceramics, confirms it.

It is possible, that the flint flakes replaces the blades in the burials of the third period of the eastern variant of Sredniy Stog culture under the influence of Northern Caucasus population, which put the flakes into the burials.

As the result of prolonged contacts with the population of eastern variant of Sredniy Stog culture, inhabitants of the Svobodnoe settlement received ceramics with shell admixture and linear ornamentation, as well as Balkan metal.

Appearance of pottery with pearls at the settlements of the third period of Sredniy Stog culture and glossy ceramics without ornamentation in the eastern variant sites, as well as the group of vessels with the steppe traces at the Svobodnoe settlement, allow me to assume the existence of mixed marriages between the Sredniy Stog and Northern Caucasus population.

Thus all available materials show, that the contacts between the Sredniy Stog population, especially its eastern variant, and the inhabitants of Northern Caucasus began about 5100-5000 BC and continued to the end of existence of the Sredniy Stog culture near 4200 BC. At the beginning those relations were connected, first at all, with the distribution of the Balkan metal, but later they were strengthened with the mixed marriages. Poor publishing of the Northern Caucasus materials prevent more detailed analysis of the relations of steppe and North Caucasus population during the Early Eneolithic.

6.3.3. The Sredniy Stog and Khvalynsk cultures

The Khvalynsk Eneolithic culture was formed in the steppe Volga basin practically simultaneously with the Sredniy Stog culture in the Don-Kalmius interflive. Earlier, I.B.Vasiliev assumed the existence of Khvalynsk-Sredniy Stog cultural-historical area, which was based, first of all, on the similarity between the funeral rites of the Sredniy Stog and Khvalynsk cemeteries (Васильев 1981). It was proposed recently, that some distinctions, which were traced between these cultures, don't allow to consider them within the framework of one cultural formation (Нечитайло 1996). However, in contradiction to I.B.Vasiliev's point of view, this hypothesis has no strong argumentation. The available data have given me additional arguments in favor of legitimacy of the distinguishing of the Sredniy Stog-Khvalynsk cultural-historical area.

In the 1980s I.B.Vasiliev wrote about the certain similarity between the Khvalynsk and the oldest Sredniy Stog ceramics (Васильев 1981, c.33). However, at that time there was no pottery in the Don region and in Ukraine, which could be compared with the Khvalynsk ceramics with stroked ornamentation. New excavation in the Caspian Sea region have expanded our knowledge about ceramics of the Khvalynsk culture and showed the existence of the large pottery group, ornamented with the long comb prints (fig.151). Analogies to this ceramic group are known in the fourth and fifth layers of the Razdorskoe settlement, as well as at Semenovka I (fig.34: 1-3, 6; fig.39: 9, 10). The Khvalynsk pottery decorated with incised lines is very similar to the ceramics of the first and second periods of Sredniy Stog culture (fig.151: 3, 6, 8; fig. 152: 7). In its turn, some pots of the Sredniy Stog culture with oval strokes ornamentation are close to the Khvalynsk ceramics (fig.15: 1; fig.17: 1, 3; fig.18: 8; fig.34: 4, 7; fig.39: 12).

Similarity of flint assemblage in the Khvalynsk and Sredniy Stog cultures is also obvious. Treatment of flint in these cultures has been directed on obtaining of the large and middle blades (fig.152: 16, 22). For this purpose one and two striking-platform cores were used (fig.152: 9, 10). There were numerous series of end-scrapers and other tools on blades (fig.152: 11–15). The types of bifacial points are also common. They had the triangular form and, predominantly, the straight basement (fig.152: 17, 18). Both the Sredniy Stog and Khvalynsk population manufactured stone adzes and chisels (fig.152: 7).

Among the common features of funeral rites of the Khvalynsk and Sredniy Stog cultures are the usage of ground cemeteries with similar lay-out, sacrificial grounds on the surface of cemeteries, interments on the back or on the side in flexed positions, use of stones (slabs, steles) and ochre in burial rite (Васильев 1981). Ornaments are also the same (fig.153): adornments from *Dentalium* shell, sea shells with holes, round beads from nacre, rectangular plates from boar fangs and shells, splintered fangs of wild boar, bone drop-shaped pendants, beads from tubular bone, copper pendants in form of shells (Рындина 1998, fig.71: 30) and spiral bracelets from wire. Bone tubules and blades also represented the common elements of inventory (fig.153: 14, 23).

The most reliable radiocarbon dates of Khvalynsk 2 cemetery have given some information about an age the Khvalynsk culture (Table 18). The synchronization of it with the monuments of Sredniy Stog culture helps in the dating of this culture. Analogies of the Khvalynsk ceramics with the comb ornament in the fourth layer of Razdorskoe indicate its existence about 5200 BC. It is more difficult to define its upper border, but, according to the presence of cord ornamentation, I can suggest that the Khvalynsk culture existed till 4000 BC.

Table 18. Radiocarbon dates of the Khvalynsk culture

Monuments and materials	Lab. Index	BP	calBC Weninger 2005	
Lebjazhinka У, burial 9	Ki-7657	6280±90		Васильев, Овчинникова 2000
Khalynsk 2 cemetery, burial 35, human bone	OxA-4310	6040±80	4927±107	Тимофеев, Зайцева 1997
Khalynsk 2 cemetery, burial 18, human bone	OxA-4314	6015±85	4908±107	Тимофеев, Зайцева 1997
Khalynsk 2 cemetery, burial 34, human bone	OxA-4313	5920±80	4806±100	Тимофеев, Зайцева 1997
Khalynsk 2 cemetery, burial 24, human bone	OxA-4312	5830±80	4670±107	Тимофеев, Зайцева 1997
Khalynsk 2 cemetery, burial 10, human bone	OxA-4311	5790±85	4637±103	Тимофеев, Зайцева 1997
Kombak-te, charcoal	ГИН-6226	6000±150	4880±192	Барынкин, Козин 1998
Kair-Shak У1, soil		5400		Лаврушин, Спиридонова, Сулержицкий 1998

Thus I can establish, that the Khvalynsk and Sredniy Stog cultures had some common features in the funeral rite, adornments, ceramics and tools. The radiocarbon dates show the synchronous existence of both cultures during 5150-4300 BC (Tables 14 and 18) on the adjacent territories. These facts allow me to combine them into the Khvalynsk-Sredniy Stog cultural-historical area. The border between the Khvalynsk and Sredniy Stog cultures probably passed between the Don and Volga rivers. Now it is difficult to determine it more precisely because of a poor level of exploration the Eneolithic sites on the left bank of the Don and on the right bank of the Volga.

Processes of formation of the Khvalynsk and Sredniy Stog cultures were interconnected. By I.B.Vasiliev hypothesis, traditions of the Samara culture of the Middle Volga and the Pricaspian culture of the north-west Caspian Sea area were laid in its basis (Васильев 1981, с.12). However, the subsequent investigations have shown, that the Samara culture had several stages, the second of which was synchronous with the Khvalynsk culture (Васильев, Овчинникова 2000, с.222-224).

Recent studies indicated, that during the Late Neolithic sites of the third period of the Orlovka culture occupied the steppe Volga basin (Юдин 2004). In the south-west they are neighboring with the sites of the second period of the Lower Don culture, in the south – with the sites of the Pricaspian culture, in the north – with the sites of the first stage of the Samara culture. In the north of steppe between the Volga and Don sites of the Voronezh-Don culture were located. The last four cultures were related, and researchers combined them into the Mariupol cultural-historical area (Васильев 1981; Васильев, Синюк 1985; Котова 1994; Kotova 2003).

Similarity of the Khvalynsk ceramics with pottery of the Late Lower Don and Early Sredniy Stog cultures, as well as with separate vessels of the Orlovka culture allow me to assume, that its formation was connected with human migration about 5200-5150 BC, caused by gradual climate dryness. Probably, that aridity forced a part of the Early Sredniy Stog population from the steppe Don region to move in northern areas along valleys of the Don, Medveditsa and Volga. Some population reached the Voronezh basin and left materials at the Universitetskaja 3, Cherkasskaja and Kopanischenskaja sites (fig.123). Vessels with lower necks at these settlements are very similar to the oldest Sredniy Stog pottery (the fourth layer of Razdorskoe).

On the right bank of Volga the migrants met the local population of the Neolithic Orlovka culture, and probably assimilated its separate groups, as well as some southern groups of the Samara culture. As a result of those complicated processes the Khvalynsk culture was formed. According to the dates of Khvalynsk 2 cemetery (Table 18), that process came to the end about 5150-5100 BC.

This hypothesis explains the main features of ceramics of the Khvalynsk culture. For the Sredniy Stog and Orlovka cultures is typical the using of clay with shell admixture. Some vessels ofthe Early Sredniy Stog complex are close in the form and ornamentation to the Khvalynsk pottery (fig.34: 1-3, 6). Original low bowls of the Khvalynsk culture show similarity with one group of ceramics of the Orlovka culture (fig.152: 6; fig.154: 14). The rims of some pots are common, too (fig.151: 6; fig.154: 11), as well as the adornments (fig.153: 9, 16-18; fig.154: 1-4, 12).

The burial 9 at the Lebjazhinka site can be considered as the first penetration of Khvalynsk population in the Middle Volga area. It dated about 6280±90 BP (Ki-7657) and represented by flexed skeleton on the back oriented to the north-east. The grave goods included a fish vertebra, flint flake and vessel. Ochre and remains, probably, from a vegetative mat were also found (Васильев, Овчинникова 2000, с.219). Authors of excavation assigned that burial to the sites of the Mariupol cultural-historical area, however, the vessel, flake and vegetative mat, which were not typical for the Mariupol funeral rite, connect this interment with burials of the Khvalynsk-Sredniy Stog cultural-historical area.

About 5000 BC rather wet period began, which is proceeded to 4800 BC. At that time the population of the Khvalynsk culture started to settle in the south of Volga valley, reaching about 4900 BC wormwood deserts in the north-west of Caspian area and the Mangyshlaks peninsula in the east of Caspian area. A layer of the Khvalynsk culture at the Kombak-te site in the north-west of Pricaspian area is dated about 4880±192 BC. Probably, here the Khvalynsk population partly assimilated the native inhabitants - the population of the Neolithic Pricaspian culture. A great quantity of ceramics with comb decoration, which are typical for the Khvalynsk culture pottery in the Caspian Sea area (Астафьев 1989), testifies it. However a part of population of the Pricaspian culture probably was ejected in the Saratov Trans-Volga region, where it has assimilated the Late Neolithic population of the Orlovka culture (Юдин 2004).

The Khvalynsk population maintained close interactions with the Sredniy Stog and Tripolye inhabitants. That direction of contacts, first of all, was conditioned by an interest in metal objects. N.V.Ryndina distinguished the Khvalynsk center of metalworking, which was formed under the western influences among them the influences of the Early Tripolye center dominated (Рындина 1998, с.159). It played a critical role in transferring the raw material, finished products and technical ideas in the Khvalynsk environment. It is interesting, that “metallurgical contacts” with the neighboring Novodanilovka center of the Sredniy Stog culture have been expressed weakly. However N.V.Ryndina does not exclude that during the Early Eneolithic the steppe population of Ukraine, alongside with Tripolyan one, took part in transit distribution the copper from the Balkan-Carpathian sources to the Volga region. In its turn, the Khvalynsk population distributed the first metal objects further to the north in the forest-steppe Volga region, where the population of Late Samara culture dwelled and to the east in Trans-Volga region as evidenced by a metal plate found in the Late Neolithic Orlovka culture layer of the Varfolomeevka settlement (fig.154: 9).

CHAPTER 7. ECONOMY AND SOCIAL STRUCTURE

At present our knowledge about an economy of the Sredniy Stog population has not been large. It could be explained by a few explored settlements, materials of which are used for the reconstructions.

7.1. Economy

There are two contradictory views on the economy of the Early Eneolithic steppe population. One of them is represented with D.Y.Telegin (Телегин, Нечитайло, Потехина, Панченко 2001). On his opinion, the economy of the Sredniy Stog population had pronounced cattle-breeding or even horse-breeding nature. Hunting and fishing played only secondary roles, while in some places there also were elements of agriculture. Economic activity of population, which left the cemeteries of the Novodanilovka type, was reconstructed as a mobile cattle-breeding, which included a breeding of horses. Telegin also distinguished some groups of masters-exchangers in that environment, who actively moved in the borders of that culture and outside it.

Y.Y.Rassamakin represents another point of view, which is based on the hypothesis, that the steppe population during the Early Eneolithic lived in a settled way and hunting played an important role in its economic activities (Rassamakin 1999).

Available materials indicate the existence of **agriculture** among the steppe Eneolithic population of Ukraine. Imprints of cultural plants on the ceramics represent one of the most important sources of its reconstruction. G.A.Pashkevich and author studied pottery of Razdolnoe, Alexandria, the third and the fourth layers of Strilcha Skelya, the second layer of Sredniy Stog, Vinogradny and Kodachek. Remains of 112 vessels, which are kept in stores of the Institute of Archaeology of Ukrainian Academy of Sciences and National Museum of the History of Ukraine in Kiev, were studied. The imprints of cultural plants are not numerous. First of all, it's related to the tradition of using of shell as an admixture, which caused only random appearance of plants in the clay of pottery. The imprints of cultural plants were found on the most numerous ceramics of the third period of Sredniy Stog culture in the Dnieper basin (Table 19). Judging from them, the population cultivated *Triticum dicoccon, Hordoum vulgare, Panicum miliaceum, Vicia ervilia* and, perhaps, *Pisum sativum*.

Table 19. The imprints of cultivated plants on ceramics

	Triticum dicoccon	*Hordeum vulgare var. coeleste*	*Panicum miliaceum*	*Vicia ervilia*	*Pisum sativum*
Strilcha Skelja, fourth layer	1	1	1		
Sredniy Stog, second layer	1			1	1?

The presence of pollen of cereals and weeds, which accompanied crops, in palynological samples from the Sredniy Stog layer of the Razdolnoe settlement, could be also considered as the evidence of agriculture (Безусько, Безусько, Котова, Мосякин 2006). These finds allow me to suggest, that the population of Sredniy Stog culture had its own agriculture and received grains not only as the result of exchange.

Studying of Neolithic and Eneolithic of Azov Sea area has shown a prolonged existence of agricultural tradition in this region. The oldest cultivating of cultural plants was fixed there about 6400 BC (Kotova 2003). The steppe population continued to practice agriculture in spite of periodical dehydration of climate, which influenced greatly the south of the steppe area.

It is interesting, that *Triticum dicoccon* and *Hordoum vulgare* were also cultivated by the bearers of the second period of Azov-Dnieper culture, who lived at the same time as the population of the first and the second periods of Sredniy Stog culture in the Dnieper-Kalmius interfluve (Kotova 2003).

The main data about cattle-breeding was received during the studying of bone collections of the settlements. The materials of Sredniy Stog (Підоплічко 1938), Semenovka (Журавлев 2001) and Razdolnoe (studied by E.A.Sekerskaja) were examined. Data from the Table 20 indicate, that the population of the Sredniy Stog culture bred cattle, sheep, goats, pigs and horses. All those species are known in the steppe Ukraine from the Neolithic (Kotova 2003).

Table 20. Faunal remains of the Sredniy Stod culture (minimum quantity of the species)

	Razdolnoe, trench V	Semenovka, third layer	Sredniy Stog, second layer
Bos taurus L	1	3	2
Capra hircus L	-	1	1
Ovis aries L	1		-
Capra and Ovis	-	1	8
Sus domestica Gray я	-	1	1
Equus caballus L.	-	2	2
Canis familiaris L.	-	-	1
In total domestic animal	**2**	**8**	**15**
Cervus elaphus L.	-	1	1
Bos primigenius Bojanus	-	1	-
Asinus hydruntinus Regalia	-	3	-
Saiga tatarika L.	-	3	-
Felis silvestris Schreber	-	1	-
Lepus europaeus Pallas	-	1	1
Lutra lutra L.	-	-	1
In total wild animal	**-**	**10**	**3**
In total animal	**2**	**18**	**18**

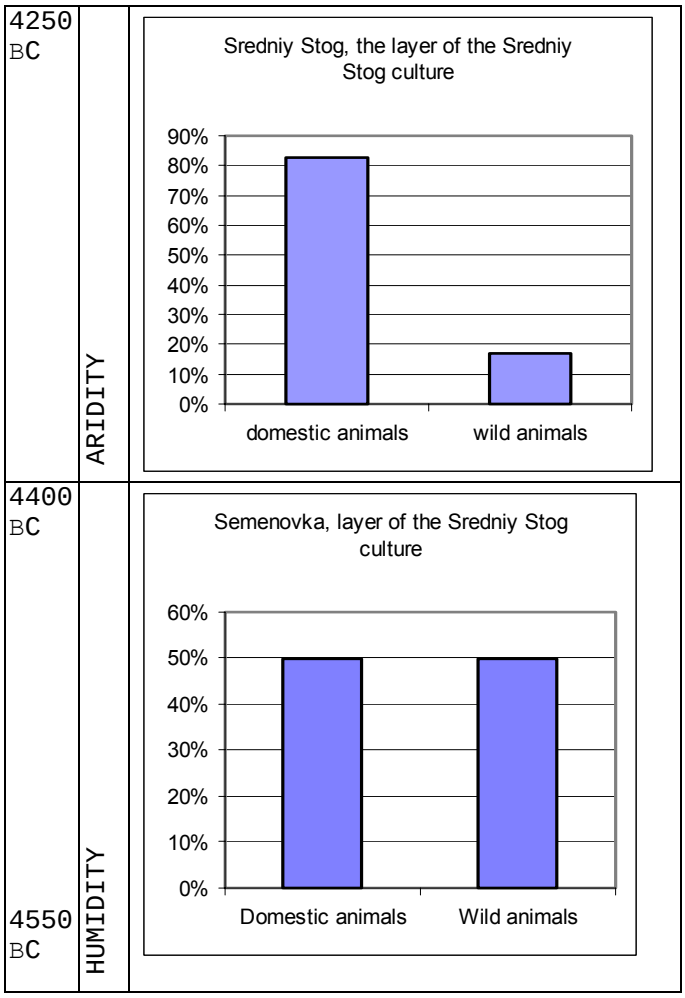
Dependence of contribution of the cattle-breeding in the subsistence from the climatic conditions has traced. First of all, I have found the dependence from the degree of climatic moisture, changes of which reflected greatly on the vegetation of such dry region as the Pontic steppe. Steppe area is characterized with the constant lack of moisture, and the aridity of the south regions of steppe exceeded northern regions six times more. The lowest reserves of phytomass are also fixed there. As mentioned above, one of the specific features of steppes between the Dniester and Don is represented with the huge numbers of plants-mesophytes with a small underground phytomass, which can't prevent easy access of trees to the steppe territory and the expansion of forest-steppe area to the south direction in the periods of higher moistening (Мордкович 1982, c.56).

Several periods of climatic moisture changes during the existence of the Sredniy Stog culture are traced. Available materials indicate, that the most numerous wild animals were found at the Semenovka site, which existed in the period of climatic moistening (Table 20). It is possible, that its inhabitants received considerable part of meat with the help of hunting, including hunting in forests, which occupied valleys of rivers and watersheds during the period of moistening.

Judging by the collection of the second layer of Sredniy Stog, another situation took place during the aridity of climate (Table 21), which began about 4350 BC. There the bones of domestic animals were represented mainly. Perhaps, the aridity decreased the number of forests in the steppe area and, accordingly, the number of the available objects of hunting. These observations reflect not

random distribution of animal bones, but general regularity, which was typical for all Neolithic and Eneolithic sites of steppe Ukraine (Kotova 2004).

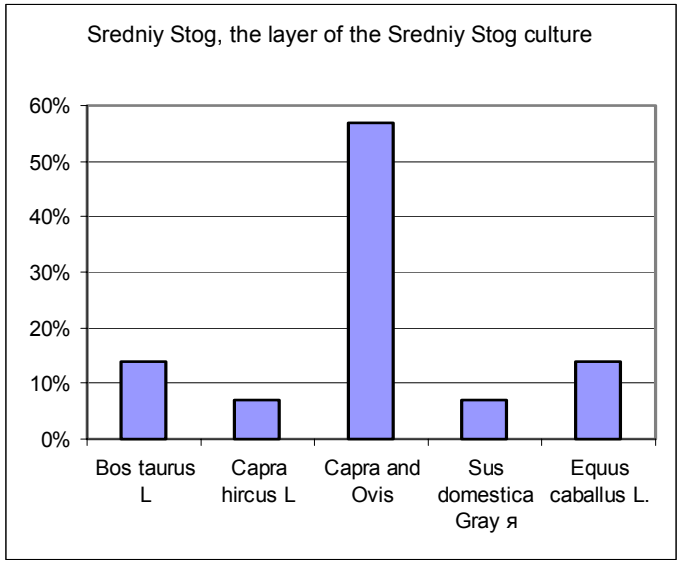
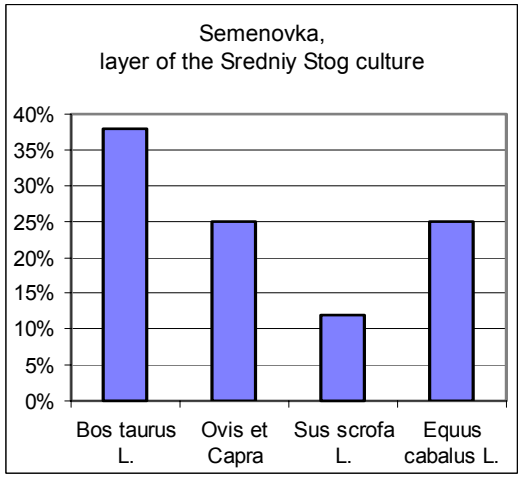
Table 21. Ratio of wild and domestic meat animals in the sites of the Sredniy Stog culture (percentage of minimum quantity of the species)



The environment also defined structures of herds of the Sredniy Stog culture. Cattle were the most numerous at Semenovka, which was inhabited during the favorable, humid period of Holocene (Table 22). The numbers of ovicaprids and horses were practically equal. The last place was occupied with solitary pigs. Ovicaprids dominated in the second layer of Sredniy Stog site, which existed during the period of aridity. The numbers of other animals were practically equal.

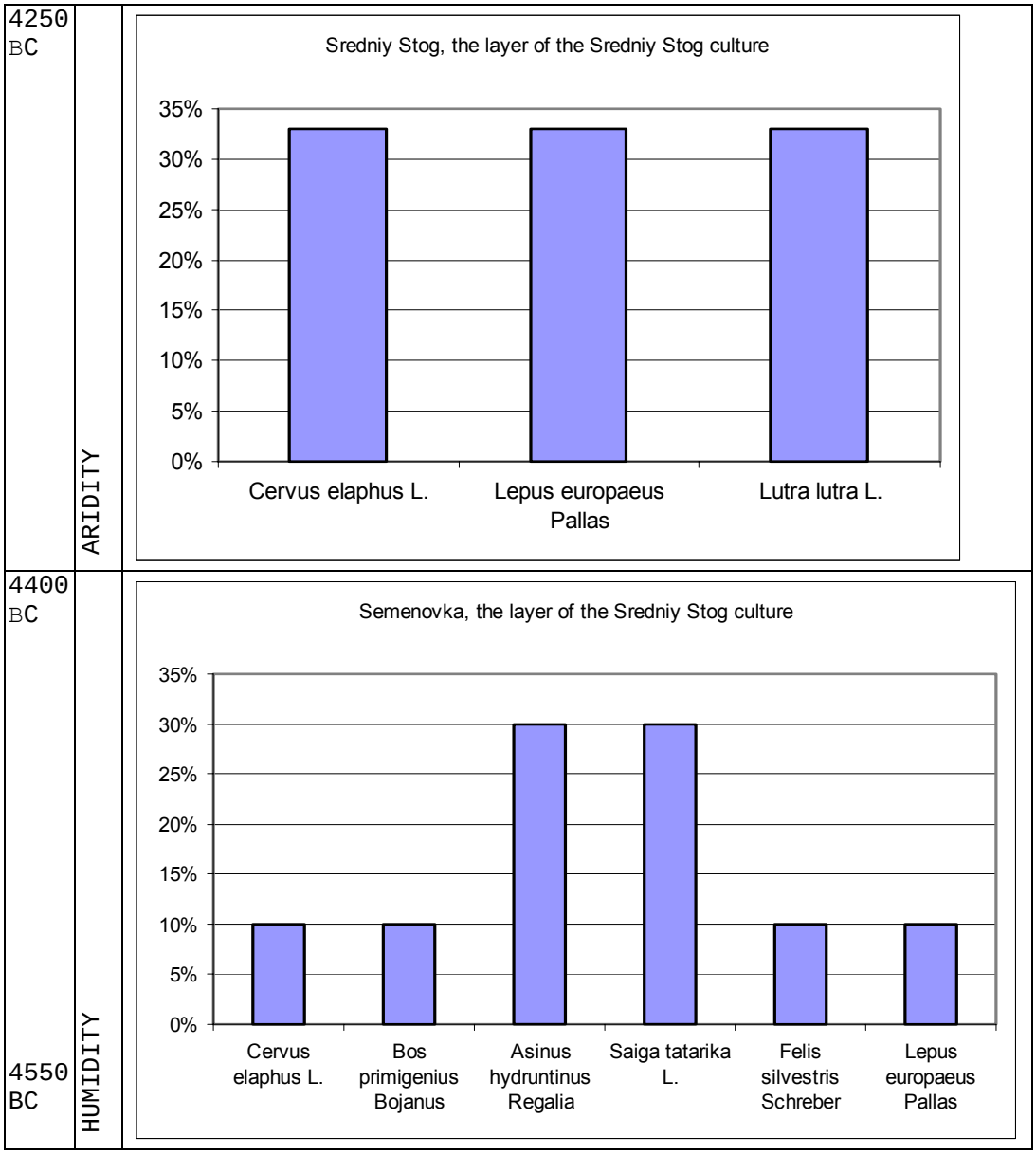
There were favorable conditions for the development of cattle-breeding of the Sredniy Stog population in the steppe of Ukraine. Steppe vegetation was rich and thus provided a wide range of forage. During the whole warm period, from the April till October, steppe vegetation provided animals with fresh forage. Special skeletal features of steppe herbage allow it to preserve all its valuable fodder qualities even in the dead state, in contrast to the forest grasses (Мордкович 1982, с.159). It provided all-the-year-round pasture of domestic animals and the thin blanket of snow allowed them to reach forage without any problems, resolving the problem of forage storage for the winter. Stabling was not necessary. But small stock of forage for the winter was required for the feeding of young animals and “non-pasturing” periods, when the weather conditions didn’t allow people to pasture animals: the high level of snow, snowstorms and low temperature.

Table 22. Quantitative distribution of different species domestic animals in herds of the Sredniy Stog culture

4250 BC	ARIDITY	
4400 BC 4550 BC	HUMIDITY	

Hunting also played an important role in the economy of the Sredniy Stog population, in spite of existence and successful development of the cattle-breeding. The proportions of wild and domestic animals show, that the role of hunting in providing meat for the population, increased in the periods of climatic moistening. Perhaps, the numbers of wild animals rose with the afforestation of river valleys and watersheds. Saigas, hares, foxes and European donkeys lived in the steppe of Ukraine during the Atlantic period. Red deer, aurochs, bison, roe and boar lived in the valley of large river Dnieper and in the periods of enough moistening they even reached the valleys of small steppe rivers, such as the Kalmius and Molochnaja. Inhabitants of the Azov Sea area predominantly hunted for saiga and European donkey, which, apparently, were the most numerous animal species in that region during the periods of moistening. Sometimes they hunted for aurochs and red deer. The Sredniy Stog population in the Dnieper valley also hunted for red deer.

Table 22. Quantitative distribution of different species of wild animals in the collections of the Sredniy Stog culture



Darts, spears, bows and arrows were the main hunting tools according to the archaeological materials. They were equipped with the bifacial points of triangular or, sometimes, leaf-like form with the straight, slightly concaved and bulging basement. The finds of spears and darts points are the most numerous. Those weapons types were typical for the steppe population from the Neolithic, which was, perhaps, related to the large distribution of collective rotational hunting for the steppe hoofed animals (Kotova 2003).

The materials of the Sredniy Stog site, where the fish bones were found, evidence about existence of **fishing**. River mollusca were also used in the economic activities of that population. Different adornments (beads, sewed plates), which were found in the Early Eneolithic cemeteries, were made of those shells.

Metalworking was one of the important branches of economy of the Sredniy Stog population. Studies of the metal inventory of the cemeteries of Novodanilovka type allowed to distinguish the steppe center of metalworking and suggest, that its craftsmen knew blacksmith and founding methods of working with copper and mastered some complex types of weakened annealing (Рындина 1998). N.V.Ryndina thinks, that the influence of Varna culture was predominant in the formation and development of Novodanilovka center. The population of the Varna

culture provided raw materials and tools for steppe population. The craftsmen of Sredniy Stog culture received some technological ideas during their training among Varna specialists. The cycle of those trainings sometimes wasn't finished and attempts of reduplication of Varna technique in local conditions were often unsuccessful. The large numbers of defective tools are explained by these facts. But, these defects were obvious only rarely and often manifested as the result of negligent or prolonged use.

Basing on the numerous metal finds in the burials of Krivoy Rog and Giurgiulesti, N.V.Ryndina draws a conclusion that steppe specialists had unusually high productivity of work and suggests, that the work schedule, which was necessary for the production of those tools, excluded the possibility of participations of those craftsmen in the agricultural works. At the same time, gradual perfection of technology under the influence of western impulses, on her opinion, indicates the formation of metalworking as independent branch of production, which separated from the agriculture and cattle-breeding and was represented in communal and inter-communal form (Рындина 1998, с.191). In the case of steppe population, specialists-craftsmen in the field of metalworking worked, presumably, in the framework of individual-family unions and had a special social status, dedicating themselves to the professional occupation.

Unfortunately, N.V.Ryndina's arguments about the separation of metalworking from the agriculture and cattle-breeding and the apportionment of professional blacksmith among the steppe population are not so persuasive, as they could be. The multiplicity of copper adornments in the Krivoy Rog and Giurgiulesti cemeteries doesn't imply their simultaneous making. These were the attributes of ceremonial-ritual clothes, which could be accumulated during long period of life of the individual person or his family; on the other hand, they could be received as a result of exchange or even left in the burial of the person, who exchanged and transported them home.

An important argument in the favor of the last suggestion is the fact, that all burials with the most numerous metal inventory, were found to the west from the main territory of the Sredniy Stog culture (Krivoy Rog, Giurgiulesti, Reka Devna, etc.) This suggestion cancels the argument, that making of numerous orders occupied all working time of blacksmith. Moreover, ethnographical data shows, that the final separation of metallurgy and metalworking from the agriculture happened only in the early class societies and only in some cases (Шнирельман 1998, с.89). The Sredniy Stog metalworking fixes the oldest period of the formation of this craft, and we can suggest that it has a seasonal nature. The blacksmiths made metal tools during those periods of time, which were free from the cattle-breeding and agriculture.

This assumption explains the fact, that after the fading of activity of the Thrace-Lower Danube center of Balkan-Carpathian metallurgical province, which was closely connected to the metalworking of the Sredniy Stog population, the last was also interrupted. If there was metalworking, which already separated from the agriculture and professional blacksmiths, than those blacksmiths simply changed the source of raw material from the Lower Danube to the Middle Danube and continued their activity, as the representatives of the Tripolye culture did during stages B I-II – C I. But, N.V.Ryndina fixes, that the Late Eneolithic Tripolye center of metalworking preserved the features of continuity with its own early center, while the Late Eneolithic center of metalworking in the steppe Dnieper basin had no relations with the preceding Novodanilovka center. N.V.Ryndina suggests, that the origin of the Late Eneolithic center of metalworking in the steppe Dnieper basin was connected with the second bringing of knowledge of copper working from the production regions of the western area of Balkan-Carpathian metallurgical province (Рындина 1998).

The data of the Sredniy Stog culture verify the hypothesis, that during the Eneolithic metal was used, primarily, in the social-prestige sphere and was available only for a few groups of people (История первобытного общества 1998). Therefore the categories of the early metal tools were limited to the different

adornments and some tools, while the majority of tools were made of stone or bone.

Exchange played an important role in the life of the Sredniy Stog population. D.Y.Telegin and Y.Y.Rassamakin suggest, that the main part pf the Early Eneolithic burials were left by groups of people or even craftsmen-exchangers, who specialized on mediatorial activities and gained their high social status due to that fact (Телегин 1985; Рассамакін 1997).

Y.Y.Rassamakin suggests, that there was a prestigious exchange between steppe population and bearers of the Gumelnitza and Varna cultures, which gave them copper and gold adornments and tools, as well as raw materials for their own production. He suggests the existence of trade and, especially, the long-distance trade. But I think, that only exchange existed during the Early Eneolithic. Apportionment of the specialized group of traders is possible only in the case of considerable social differentiation and allocation of craft, because the luxury goods play the most important role in the early trade (Шнирельман 1998, с.115). But now we have not fixed the existence of crafts and considerable social differentiation in the Sredniy Stog society on the basis of existing materials.

As a whole, the tendencies, connected with the self-independent economy, dominated during the Eneolithic and food exchange played a secondary role in the life-supporting economy of the steppe and surrounding groups of the Eneolithic and Neolithic population. According to ethnographical data, domestic animals, tools and raw materials, which could be used for the producing of tools, were originally used for exchange, first at all, in ritual-prestigious goals (Шнирельман 1998, с.106)

It is necessary to mention, that the Early Eneolithic of the Eastern Europe is characterized with the development of the prestigious exchange, as a part of prestigious economy. The last developed from the life-supporting economy, when the growth of the productive powers allowed people to receive large surplus of production. Researches mention the diversity of its functions - they varied from the guaranteeing of support in times of need, because it assisted in the development of mutual aid, to the perfection of conjugal ties system and establishment of social gradations in horizontal and vertical dimensions (Шнирельман 1986).

Its blossoming during the Early Eneolithic was related to the appearance and gradual migration of numerous groups of the Tripolye population to the east. As mentioned above, newcomers, who occupied lands of forest-steppe, which belonged to the local Neolithic population, had to maintain friendly relations with another adjacent population – inhabitants of the steppe zone. Prestigious exchange in the beginning (during the Tripolye A period) and prestigious and economically profitable exchange, as well, as marriage ties later (Tripolye B I, BI-II periods) guaranteed peaceful existence and support of the steppe people for the representatives of Tripolye culture. According to the ethnographical data, symbolic exchange of prestigious items was used for the establishment of friendly relations, which helped in the development of the exchange of those goods, which were necessary for the economy (Шнирельман 1986, с.385).

First at all, we should analyze possible exchange operations of steppe population in full details. Available materials allow me to suggest the existence of the three exchange systems in its environment, which were fixed on the basis of ethnographical data. Intercommunal exchange within the ethnolinguistic group represented the first system, which was embodied by the Sredniy Stog culture. Usually it was connected with the gifts exchange, which symbolized the readiness of partners to help each other in all situations and share property in the case of need (Шнирельман 1998, с.344). The necessity of it was related to the unequal distribution of natural recourses.

Unfortunately, we can’t find the majority of organic products at the archaeological monuments, which, according to the ethnographical data, were used

in the exchange. The most vivid evidences of the exchange operations are flint materials. For example, the population of Sredniy Stog culture used, mainly, the flint from the Severskiy Donets basin. Finds of cores, primary blades and flakes testify the fact, that chopping of raw materials, which were delivered to the Azov Sea area, the Don and Dnieper basins took place directly at the settlements. At the same time, we can't exclude that some cores, large blades and axes were made on the place of flint's extraction, and ready tools were used during the exchange.

So, the communities of eastern variant of the Sredniy Stog culture, which situated in the Severskiy Donets basin, could deliver flint and flint tools to the population the Azov Sea area, the Don and Dnieper basins. The population of the south of steppe Dnieper basins, perhaps, delivered salt to the other communities, as well as serpentinite, deposits of which are known there. Inhabitants of valleys of such large rivers as the Don and Dnieper, where even in the arid periods conditions for the agriculture were good, could propose the production of plant growing to the inhabitants of valleys of small steppe rivers, exchanging it for cattle. There were more wild animals in the valleys of large rivers, which were occupied with the forest vegetation in the period of existence of the Sredniy Stog culture. Their furs, horns and fangs, probably, were interested for the inhabitants of valleys of small steppe rivers, who were forced to hunt for saiga and donkey, especially in the periods of aridity.

Exchange with the nearest neighbors, who belonged to different ethnic groups (population of the Tripolye, Kiev-Cherkassy, Donetsk and Sredniy Don cultures, the Eneolithic population of Northern Caucasus and Crimea), represented the second system. Prestigious exchange, which played a social role, was the most important in it, assisting in the establishment of peaceful relations and contacts. I can try to identify the range of possible products of the prestigious and economical exchange. Researchers mentioned different items, which could be the objects of exchange between the steppe population and its western neighbors. According to D.Y.Telegin, inhabitants of steppe delivered to the representatives of Tripolye tools from the high quality Donetsk flint in exchange of Balkan copper (Телегин, Нечитайло, Потехина, Панченко 2001). Y.Y.Rassamakin suggests, that flint arrow-heads, large blades and products of cattle-breeding could be the objects of exchange from the direction of steppe population. In return, they could receive copper, copper wares and products of agriculture (Rassamakin 1999). T.G.Movsha widened the list of possible objects of exchange (Мовша 1998). She proposed, that the steppe population had given the maces and scepters, shell beads, bone wares and domesticated animals of high breed to the bearers of Tripolye culture.

The flint tools and adornments really could be the main objects of prestigious exchange from the direction of Sredniy Stog culture. Perhaps, ceramics (according to the pot from Novodanilovka), obsidian (obsidian blade in the burial 9 of Mukhin 2), geshir beads (the Mariupol and Staronizhesteblievskaja cemeteries) were used in the prestigious exchange from the direction of Northern Caucasus population.

But, the existence of economically profitable exchange was also possible. For example, Donetsk flint could be used in exchange operations with the inhabitants of Middle Don, Volga and Northern Caucasus. Perhaps, the population of eastern variant of the Sredniy Stog in the Don-Kalmius interflive, where polished stone tools were used from the Neolithic, was interested in the receiving of serpentinite and other soft rocks from the population of Northern Caucasus for making polished artifacts (tools and symbols of power). It is not exclude, that the receipt of products of the plant growing from the Northern Caucasus, especially in the periods of aridity. In addition to it, the Sredniy Stog population could also receive them from the Tripolye population.

I can hardly suggest the use of flint artifacts in the economically profitable exchange between the steppe and Tripolye population, while the last were widely used in the prestigious exchange between the inhabitants of other

regions of Europe during the Later Neolithic. Till now, researchers haven't mentioned the finds of Donetsk flint at the Tripolye settlements and proposed the participation of flint in the exchange, basing only on finds of considerable amount of qualified flint wares in the Early Eneolithic burials in the territory to the west from the South Bug. But, they could represent the tools or weapons, which were taken to the long travel and used as the part of funeral inventory or object of prestigious exchange.

This suggestion is also testified by the comparison of numbers of flint artifacts in the burials on the territory of Sredniy Stog settlements distribution and outside it (Tables 11 and 12). For example, the whole number of flint artifacts in the burials outside the territory of settlements distribution slightly exceeds their numbers in the burials on this territory: for eastern variant 72% of all burials on the main area of the and 60% outside this area; for western variant 38% of burials on the main territory and 63% burials of the members of exchange expeditions. Disproportion between the numbers of burials with flint wares in eastern variant can be explained the stock of these artifacts for everyday needs in the exchange expeditions. Coincidence of frequency of flint tools in burials of the western and eastern variants outside settlements area only testifies this interpretation. Perhaps, the numbers of flint tools, necessary during expeditions, were nearly equal.

Higher percentage of the flakes (13%), tools (20%) and large blades (53%) in the burials of members of exchange expeditions of the eastern variant in the comparison with the burials of western variant (flakes is absent, tools – 10%, large blades – 25%, Table 12) could be explained by the direct access to the sources of raw material and sufficient numbers of experienced craftsmen among the population of the eastern variant, that allowed to bury those flint wares with deceased more often, than in the case of representatives of the western variant, who had no sources of high quality flint on their territory.

Finds of bifacial points indicate, most likely, only the wide circulation of this kind of weapon, not the coming of such tools from the steppe area. Bifacial points were widely distributed in the steppe and forest-steppe areas of Ukraine during the Late Neolithic and Early Eneolithic. The Tripolye population could become acquainted with it for the first time as the result of contacts with the bearers of the Bug-Dniester, Azov-Dnieper and Early Sredniy Stog cultures. The Tripolye craftsmen, who could make high quality flint tools, also could produce such points.

Unfortunately, the origins of flint, from which the majority of Tripolye points were made, are not discovered. But, T.G.Movsha noted, that all points of Soloncheny 2, excluding one, were made of the local Dniester flint (Мовша 2000). She also proved, that a lot of regions of Tripolye-Cucuteni community had their own high quality raw materials. Their inhabitants provided raw materials and semi-finished products to the regions, where was no flint, in the context of inter-Tripolye culture exchange. At the same time, the Tripolye population had a high level of technology related to its handling and wasn't required supplies from other cultures (Мовша 2000). I agree with these conclusions and want only to mention, that separate flint tools could be used in the prestigious exchange, which was based on the necessity of cultural contacts, not the economic needs. Cases, when the flint tools were exchanged in the prestigious goals, are known during the Neolithic and Eneolithic on the large European territory (Шнирельман 1988, с.108).

But, basing on the available materials, I can suggest, that the points were the least used objects of exchange for the steppe population. Their presence in the burials in the area of settlements distribution and outside it (Table 12) testifies this. Points were found only in the burials of western variant, which situated in the settlements area, while in the eastern variant they are equally common for both groups of burials (on the main territory and outside it). Singleness of points in the burials, which were situated outside the area of distribution of the settlements, shows the peaceful nature of the

Sredniy Stog population, which penetrated on foreign lands and strengthens the arguments against the theory of military conflicts of steppe population with agricultural population of the Danube-Dniester region.

Salt, the extraction of which was possible in the southern regions of Dnieper basin, could be used as an object of economically profitable exchange from the direction of the Sredniy Stog population. That product was used for the exchange in Europe during the Neolithic, and it could be extracted with the help the evaporation (Шнирельман 1998, с.80). There was no sense in the use of cattle and ovicaprids for the exchange with the population of Northern Caucasus and Tripolye, because of the remoteness of driving of cattle for making exchange and highly developed cattle-breeding of those populations. But, there are no doubts, that they used domesticated horses, which were bred for long time by the steppe population, for the exchange. The number of horses in the collections of all Tripolye sites of A and B I periods vary, mainly, from 1 to 5 individuals (Журавлев 2004). Such numbers, taking into account the duration of existence of settlements, couldn't provide the reproduction of livestock, which allows me to suggest the periodical appearance of new horses as the result of exchange operations with the Sredniy Stog population.

As a whole, domestic animals were used for the strengthening and development of social ties, becoming an integral part of marriage ransoms, gifts and sacrifices. Their role as an instrument of the social-prestigious ceremonies was caused by their portability (especially, horses), which resulted in the ease of alienation (Шнирельман 1998, с.347). The Early Eneolithic population of steppe actively used the domestic animals for sacrifices, which is testified by the finds of bones on the surface of the Chapli, Nikolskiy and Lysogorskiy cemeteries.

The third of the exchange systems was represented with the long distance exchange, which included special expeditions. According to the ethnographical data, such expeditions were planned beforehand and their participants were gathered from the men with the high social status. Their leaders were also the heads of separate villages (Шнирельман 1998, с.341). Four burials, made by the Sredniy Stog rite and accompanied with the symbols of power (Kasimcha, Decea Muresului, Kulevcha, Suvorovo) and found outside the main territory of the Sredniy Stog culture, have confirmed the participation of leaders in the long distance expeditions. As a whole, we can consider the majority of burials, discovered outside the main territory of the Sredniy Stog, as the burials of the members of expeditions. They could be made under kurgans (Suvorovo, Kainary, Chongrad), if they were situated far from friendly villages, and without them in the ground cemetery, if they made on the special territory not far from the village of relatives by marriage (Decea Muresului, Giurgiulesti).

Perhaps, the Sredniy Stog population made such expeditions to the Lower Danube in search of the most prestigious things of Early Eneolithic – metal and tools from it. It also received bracelets, made of *Spondilus* shells (one of which was found in the Lysogorskiy cemetery), as well as sea shells, from the western partners. T.G.Movsha suggested, that the exchange expeditions of steppe population did not overpass all the distance from the initial to the terminal points and passed only parts of it. In other words, it was indirect exchange, which was made with the help of population of Tripolye culture (Мовша 2000, с.41). It's difficult to agree with this hypothesis, because the burials, made with the accordance to the steppe funeral rite, were found along the whole length of route from the South Bug to Danube. So, I can suggest, that the expeditions of the Sredniy Stog population reached Thrace-Lower Danube metallurgical center. But, this condition doesn't exclude the receiving of some metal with the help of mediatorial exchange through the population of Tripolye culture.

Making of such long distance expeditions demanded, at least, the use of horse as pack animal. The breeding of domesticated animals by the inhabitants of the steppe area – the ancestors of Sredniy Stog population – during more than

1500 years should prepare them for the rational use of horse. I can't exclude, that horses were also the objects of exchange from the direction of steppe population during far expeditions.

It is possible to suggest the existence of two kinds of property, according to the ethnographical data for the period of the Early Eneolithic. The first of them was private, which was earned by the personal work and could be easily expropriated or used in the prestigious and ordinary exchange (domestic animals, tools, adornments, pottery, etc.). The second kind of property was collective and included land, which was inherited from the ancestors and had to be passed to descendants. Land was a clan property and adult members of the clan could own individual parts, while families could use them (Шнирельман 1998, с.351, 352). The existence of agriculture among the ancestors of the Sredniy Stog population during practically 1000 years should cause the formation of the order of inheritance of property to the cultivated land.

Thus on the basis of materials of the Early Eneolithic monuments the complex economy of Sredniy Stog population can be reconstructed. It included agriculture with the cultivating of wheat, barley, millet, vetch ervilia and, perhaps, pea, as well as cattle-breeding with the breeding of cattle, sheep, goat, pig and horse. Hunting also played an important role in the life of Sredniy Stog population, who hunted on saiga, donkey, aurochs, red deer, hare, badger and otter. Prestigious economy developed in the Sredniy Stog society as well as prestigious and economically profitable exchange, which strengthen the ties not only between the Sredniy Stog communities, but also improved relations of steppe population with the outside world.

7.2. Social structure

Some problems of the social structure of the Early Eneolithic population in the steppe Ukraine were considered by the researchers, especially, during the analysis of burials and relations between the steppe and Tripolye population.

Y.Y.Rassamakin supposed, that the prestigious exchange caused social stratification of society and allocation of elite group, connected with the mediatorial activities. Very rich burials with a lot of prestigious finds are related to this group. Copper adornments and awls, gold tools, arrow and dart heads, long flint blades, stone axes-adzes, belts from nacre beads, scepters and maces and imported pottery are among these prestigious finds. He considered ground burials without rich inventory as the burials of ordinary people (Рассамакін 1997). On his opinion, there were patriarchal chieftains in the elite group, which were buried with the symbols of power (Rassamakin 1999).

T.G.Movsha and V.G.Petrenko considered, that the majority of the Early Eneolithic burials of steppe Ukraine left by the highest armed clan nobility, (Мовша, Петренко 1999). Unfortunately, this hypothesis wasn't concretized. In another work T.G.Movsha suggested, that steppe population was on the same level of social-economical development as the Tripolye-Cucuteni and Gumelnitza population (Мовша 2000).

But I can't agree with the last argument. According a preliminary data, the social structure of Tripolye population was the most similar to the structure of chiefdom. It means the social organism, which consisted of the group of communal settlements, which hierarchically subdued to the central and the largest of them. The leader (chieftain), who organized economical, redistributive, forensic-mediatorial and religious-spiritual activities of society, relying on the rudimentary government bodies, lived there. One of the important indicators, which were attended to the rise and development of chiefdom, were the wars, related to the building of fortified constructions and mass finds of weapons (Крадин 1995). All these signs we have found on the Tripolye culture monuments.

Nowadays we have known only season sites, even without the remains of any buildings, in the steppe between the Don and the Dnieper. In contrast to the Tripolye culture there is no any system of settlements of different size, especially fortified. Small cemeteries and sites indicate, that in spite of the longevity of existence of the producing economy in the steppe area, there were a lot of features in the social sphere of the Early Eneolithic population, which were typical for the preceding time and, first at all, small late-clan communities. Basing on the data of the Neolithic monuments (Котова 1994; 1997), I can suggest, that the clans of steppe population of the Early Eneolithic, as the clans of Neolithic population of that territory, were exogamy, and the territorial groups, which were unified by the mutual habitation, consisted of the representatives of different clans.

Community was the most important territorial group. Apparently the Sredniy Stog population had one-clan community, which was formed on the basis of the members of one clan or its smaller subdivision and persons, who became the part of it in a result of marriage, and their relatives. Small sites of the Sredniy Stog culture and the absence of large settlements, where multi-clan community, which size varied from 100 to 1000 people, usually lived, also testify it. The small sites of the Sredniy Stog culture and small cemeteries allow me to suggest minimal size of communities.

Separate communities were subjected to the crises of different kinds in the conditions of the low level of economy and unreliable base of it in the arid south of steppe area. Bad harvests (especially in such risky region for agriculture as southern Asov Sea areas), epidemics, instability of demographical situation, inner conflicts – all those factors testified the great importance of the wide network of social contacts. The fact, that in the case of the segmental structure of clan organization many relatives lived in the other communities, assisted the development of that network.

Besides kindred relations, partnership, which was based on the regular exchange of material values, sometimes with the representatives of other cultures, also contributed to the strengthening of intercommunal relations. In the most cases relations, which were based on marriages, weren't very reliable and needed strengthening with the help of regular feasts-holidays and periodical visits and small services. The regular feasts, which were held by separate communities for the whole neighborhood, served to the strengthening of social contacts, which guaranteed some stability in the intergroup relations in the nearest future.

According to the available data, social development of the Early Eneolithic population was similar to one of the Neolithic population of the Lower Don and Azov-Dnieper cultures, for which the late-clan community was also reconstructed (Котова 1994; 1997). The most detailed data about the structure of steppe Neolithic society is represented with the materials of cemeteries, numerous skeletons of which have gender-age definitions. This data is also expanded with the analysis of the adornments of funeral clothes, one of the most important functions of which was class function, which reflected the individual qualities of deceased and his role in the collective. The monuments of the Lower Don and Azov-Dnieper cultures, which preceded the Sredniy Stog culture, presumably were left by the tribes, which consisted of two clans. Each clan had common traces of the funeral rite, which were typical for the whole culture, and its own specifics in orientation of deceased and set of adornments of funeral clothes.

Using these features for the analyses of the Sredniy Stog burials, it is possible to suggest, that the majority of Sredniy Stog population was related to the two main clans, which oriented skeletons, mainly, to the east and rare - to the north (Chapli, Yama, khutor Popov, four burials of Igren cemetery, burial 29 of Staronizhesteblievskaja, etc). Separate burials with the western (burial with the bracelets of Mariupol, burial 17 of Baturinska, etc.) and southern

orientation (burials of Staronizhesteblievskaja, etc.) were left by the representatives of two other, not so numerous clans.

According to the ethnographical data, processes of unification were traced, when groups of people, thickened because of the hunger, epidemics or wars, couldn't exist as the individual units. Sometimes, those groups invited their relatives or friends to occupy free areas of their territory (Шнирельман 1998). Perhaps, the numbers of the representatives of clans, which buried their deceased with heads to the south or west, diminished because of the some crisis situations. Their remains were included in the communities, the majority of which were represented with the population, which buried their members with heads to the east or north.

It is interesting, that the cemeteries of Sredniy Stog culture basically belonged to clans. In other words, they included the burials, which were oriented in the one direction: to the east or to the north. Some cemeteries included burials of the members of several clans (Mariupol cemetery, where two burials had eastern orientation and one had western orientation; Giurgiulesti, where three burials were oriented to the east and one - to the south; kurgans of Baturinskaja and Staronizhesteblievskaja, where burials with the southern and northern orientations were found).

Burials in the kurgans and Giurgiulesti cemetery, which were made outside the main territory of Sredniy Stog population, could contain the remains of members of two clans, which died during the exchange expeditions. Perhaps, such expeditions had traditional routes and those burials could be connected with the earlier burial, where the kurgan or sacrificial complex was made for the marking of its location. In that case, perhaps, it was important to bury deceased near the member of its own or related community regardless of the clan of deceased. It is interesting, that the burial with southern orientation in Giurgiulesti was made aside from the group of skeletons with eastern orientation that testifies my hypothesis.

There was more complicated situation in the Igren cemetery, where the burials with eastern (seven skeletons), northern (four skeletons) and western (one skeleton) orientation were found. Such variety might be explained by the prolonged use of cemetery (during 500 years), when the representative of different Sredniy Stog communities with the different clan core could bury their members there. It is not exclude, also, that representatives of small multiclan community left that cemetery. V.R.Kabo noted, that such communities appeared in the crisis situations, which were ordinary in the prehistory (Кабо 1986, с.74). And while that phenomenon was typical for the food-gathering communities, such multiclan communities could exist among the bearers of Sredniy Stog culture. Moreover, researches note the similarity of social structure of numerous food-gathering communities with the organization of early farmers and cattle-breeder (Шнирельман 1986, с.244).

Reconstructed social structure of the Sredniy Stog population is fully corresponds to the ethnographical data, where members of each clan were dispersed on the large territory and lived in the different settlements. The clan controlled distribution and redistribution of lands, organized the most important ceremonies, the largest holidays, on which the representatives of other clans were invited and which assisted the ethnical consolidation. Generally, clan was represented with the exogamic group of 100-1000 persons. Exogamy in many cases had, first at all, social-economical significance. Several clans, which had steady matrimonial relations, composed a tribe and its universal feature was a tendency for endogamy. It caused the strengthening of another tendency, because of which tribe could be considered, as cultural-linguistic, and, therefore, ethnical unity. As a whole structure tribe appeared only rarely and included for about 1000-5000 people. It was the basis for making defensive alliances. Factors of prestigious economics with its ceremonial exchange and holidays operated inside them (Шнирельман 1998).

As a whole the social structure of Sredniy Stog population can be reconstructed as a “tribe” in its archaic form. It means, that it consisted of amorphous totality of segments of different taxonomic levels without clear structural borders and general guidance. These segments were unified by the real and fictitious kinship. They also had common territory of living, common name, system of rituals and ceremonies. Such social organization differed from the secondary form of tribe with more politically integrated structure, which had elementary bodies of tribal power (general meetings, council of elders and warrior/civil chieftains). It developed as a result of outer pressure of societies with the developed state system on societies without state system (Крадин 1995). Archaic tribes as the social organization are genetically related to the chiefdom, assumed for the Tripolye culture. Nevertheless they are considered as less developed form and often compared with it as decentralized and centralized states of social system. N.N.Kradin mentioned, that if the tribe represents some totality of segments, which are unified by the elementary bodies of tribal power, than theoretical model of chiefdom could be represented with the same totality of segments, but unified on the basis of centralized power and hierarchical system of decision-making.

Burial materials allow us to make some assumptions about the social differentiation of the Sredniy Stog society, which consisted of individuals, who had mastered some social regulations and skills of behavior, which were typical for that human group and which found their own place in the system of social connections. In the late-clan societies, men considered adult from 17-25 years, while the women could reach that category earlier, getting married in the first time. In was necessary to participate in the biosocial reproduction of the collective practically in every society, regardless of the level of its social-economical development. Only those persons, who provided the reproduction of posterity, could be the full members of society (Гиренко 1991, с.147-148). Moreover, the existence of household economy as the economical unit was possible only in the combination of man and woman activities, and therefore only marriage gave relative economical independence for man and woman. Widows and bachelors couldn’t reach it because of the imperative gender-age division of labor. Gender-age groups were generally characterized by the differences in the norms of behavior, prestige and privileges, which reflected in the funeral clothes and inventory.

Unfortunately, the gender was identified only in the case of 46 from 113 skeletons of the Sredniy Stog culture. 22 of them belonged to children, 5 – virile men (20-35 years), 8 – mature men (35-55 years), 3 - old men (older, than 55 years). Three skeletons were identified as men, without indication of age. Only five skeletons belonged to women: 2 – young women (15-20 years) and three skeletons had no indication of age.

According to the burials of the first period of Azov-Dnieper culture, which were related to the Sredniy Stog culture, I can reconstruct the following situation. The Azov-Dnieper population had children funeral clothes and grave goods, which differed from the adult inventory and clothes. First of all, children had richly decorated funeral costumes, which included rare kinds of beads and pendants. But, there were no tools in their grave goods. Teenagers, aged 10-17, were similar to the children in the case of inventory and clothes adornments. According to the similarity of the grave goods of men and women in the age of 17-20 and 20-35 years I can suggest, that they became adult for about 17 years. Materials of the Neolithic cemeteries obviously demonstrated the specifics of social status of people, who were married and thus guaranteed the reproduction of community. They were accompanied with the different inventory and were dressed in the decorated clothes. Perhaps, women burials without adornments on the clothes fix the unequal position of women in the childbearing age. Women, who were older, than 35 years, and the majority of men of that age had also no adornments (Котова 1994; 1997; Котова, Тубольцев 1999).

All mentioned regularities have been also traced in the Sredniy Stog burials. Comparing burials of children and adults (Table 24), we can see, that

they didn't differ in the main categories of artifacts. But, if some separate adornments (one pendant, one or two beads) accompanied the burials of adults, than children had more richly decorated clothes, which included large numbers of beads, pendants and bracelets. Ceramics is typical for the children burials (the burial 7 in kurgan 5 of Mukhin 2, khutor Popov, burial 15 of Igren cemetery, burials 7 and 9 of Decea Muresului and burial 2 of Giurgiulesti). It was encountered twice as rarely among the burials of adults. But children burials were accompanied with the flint artifacts, especially tools, more rarely, than adult.

Table 24. Distribution of some categories of the grave goods and adornments in the children and adult burials

Artefact	Children burials	Adult burials
Flint ware	11 – 46%	62 – 63%
Adornments	14 – 58%	46 – 46%
Copper ware	7 – 33%	30 – 30%
Vessel	6 – 25%	13 – 13%
In all	24	99

Clothes of young women had the richest decorations (burial 9 in kurgan 5 of Mukhin 2, burial 1 of Krivoy Rog), as well as during the Late Neolithic. Funeral clothes of men, who were older, than 40 years, had no adornments (burials 2, 3, 5, 18 of Igren cemetery, burials in Lugansk, burial 4 in kurgan 1 of Suvorovskaya, burial 30 in kurgan 5 of Mukhin 2, burial XXI of Mariupol). There was only one exception, which is represented with the burial 2 of Krivoy Rog, where skeleton with the numerous adornments was identified, as the skeleton of man of 40-50 years (Рассамакін, Будников 1993). But, it's only preliminary identification. Full anthropological research of burial hadn't published yet and final conclusions could be possible only after the official conclusion of anthropologist. Burials of women, who were older, than 40 years, have not been found.

The Early Eneolithic burials with the symbols of power are especially interesting for the researchers. Only one burial with the stone mace in the Mariupol cemetery and burial in Lugansk with the bone finial were found on the main Sredniy Stog territory. Perhaps, the copper hummer from the ruined burial of Petro-Svistunovo was also the symbols of power. All other burials with maces and scepters were situated in Northern Caucasus and to the west of the South Bug. Y.Y.Rassamakin considered burials with the symbols of power as the burials of patriarchal chiefs (Рассамакін 1997). But I think, that the use of term "leader" would be more correct. Sredniy Stog culture did not reached the level of chiefdom in its social development and it is testified by its burials data. The burials with the symbols of power on the main territory of this culture are very rare, and they are situated in the same area of cemetery as the burials of other members of clan, without any distinguished features, such as special place of burial, size or burial constructions. All these features were typical for the burials of significant persons in the societies, which didn't reach the stage of chiefdom (Крадин 1995).

It is necessary to note, that two Sredniy Stog burials with symbols of powers outside the main cultural territory had complicated funeral construction. The burial 4 of Giurgiulesti was made in pit with ledges and depth about 5 m. Pit construction included stones and wood roof. The burial 7 in kurgan 1 of Suvorovo had stone cromlech. It is possible that under the influence of the Tripolye and Gumelnitsa cultures with more advanced social ctructure the Sredniy Stog population began to emphasize the high status of leader complicated funeral construction, especially on the territory of the Tripolye and Gumelnitsa cultures.

Not numerous anthropological definitions and archeological materials allow us to imagine functions and age of the Sredniy Stog leaders. The burials with the symbols of power dominated on those territories, where exchange expeditions

took place. According to the ethnographical data, their participants were especially composed from the men, who had high social status, and the leaders of villages headed those expeditions (Шнирельман 1998, с.341). Hence, it was possible, that the burials with symbols of powers really belonged to the leaders of Sredniy Stog communities. Nine burials were published (burial XXIV of Mariupol, burial 12 of Decea Muresului, burial 4 of Giurgiulesti, burial 2 in kurgan 1 of Lugansk, burial 33 of Kulevcha, Kasimcha, burial 7 in kurgan 1 of Suvorovo, burial 1 of Falciu and, perhaps, Arhara). But, judging from its location near the Volga, Arhara can belong to the Khvalynsk culture.

The comparison of their grave goods and adornments of funeral clothes shows the following picture. Funeral clothes were richly decorated with beads, pendants and plates-braids in three burials (burial XXIV of Mariupol, burial 12 of Decea Muresului and burial 4 of Giurgiulesti). There weren't any adornments of funeral clothes in six burials (burial 2 in kurgan 1 of Lugansk, burial 33 of Kulevcha, Kasimcha, burial 7 in kurgan 1 of Suvorovo, burial 1 of Falciu and Arhara). There were only scepters in the two of them (Kulevcha and Arhara). Sometimes, in addition to the finial, the burial was accompanied only with the flint ware (Kasimcha); the flint with the bone tubule was encountered in the burial 2 in kurgan 1 of Lugansk; the flint ware with the grindstone and copper awl were found in the burial 7 in kurgan 1 of Suvorovo; the flint ware with stone axe accompanied the Burial 1 of Falciu. Similar picture was typical for the Neolithic part of Mariupol cemetery, where one burial with a mace had richly decorated funeral clothes (the burial VШ) and the second deceased (the burial XXXVII) had no decorations of his clothes (Макаренко 1933).

Taking into account, that the decoration of funeral clothes of men in the age of 17-35 years and the absence of decorations in the burials of men, who were older than 35-40 years, was typical for the Neolithic steppe inhabitants, which was ancestor of the Sredniy Stog population, while there was no decorations in the Sredniy Stog burials, which belonged to the men, who were older than 40 years, I can suggest, that exactly men, who were older than 40 years, were buried without adornments, but with the maces.

It was typical for the late-clan community, that the status of leader was acquired in the mature age. First at all, leadership was provided by the personal qualities: physical health and strength, intelligence, organizational talent, good knowledge of mythology, magical rites, etc. Successful exchange also proved special majesty of leader (Шнирельман 1998, с.112). But the burials with maces and decorated clothes in Mariupol, Decea Muresului and Giurgiulesti cemeteries allow me to suppose, that even men in the age of 30-35 years could become leaders in the individual cases. This supposition is testified the anthropological determination of the skeleton of the burial 4 of Giurgiulesti with symbol of power and richly decorated costume. It belonged to the 20-25-year-old man. Perhaps, during the Early Eneolithic leadership was connected with the active prestigious and economically profitable exchange related to the long distance expeditions, participation in which was difficult to a men of senile age.

According to the Y.Y.Rassamakin suggestion, the development of prestigious exchange of the Early Eneolithic population caused the distinguishing of elite groups, representatives of which were buried with the rich set of items (Rassamakin 1999). There were groups of mediators, thanks to which the metal from the Balkan-Carpathian metallurgical province reached steppe regions of Eastern Europe. With the collapse of that metallurgical province all those elite groups vanished, which is testified, according to Y.Y.Rassamakin, by the absence of burials with prestigious items.

I think, that the general level of development of the Sredniy Stog population couldn't include the distinguishing of elite groups. Researches usually consider the steppe burials with the metal wares, numerous adornments or stone tools as "rich" and "elite". In truth, the prestigious items, according to the ethnographic data, included nacre beads, ceremonial belts with the

intertwined shell beads, obsidian or flint blades, copper blades, etc. (Окладникова 1996). But, as I tried to show above, considerable amount of adornments and their presence on the funeral clothes as a whole was determined, first at all, by the age of the deceased (children or youth) and the role in the biological reproduction of community (men and women from 17 to 35-40 years). Considerable amounts of the flint blades, perhaps, accompanied burials of the craftsmen (for example, burial 46 in kurgan 1 of Alexandrovsk).

I think, that the funeral clothes with the copper adornments were typical for the members of those communities, which were the most active in far exchange expeditions. Members of the other communities had adornments from shells and bones. Probably persons with the same social status had funeral costumes with similar decoration, which were determined by the sex and age. Only raw materials of adornments (copper, bones or shells) could vary. This assumption is testified by the burials with the symbols of power, which determined high social status of deceased, without different adornments. It indicates, that such kind of prestigious items, as adornments, was related to the gender-age characteristics, but the accumulation of wealth among the elite, as well as its allocation, did not appear yet in the Sredniy Stog society.

There was a combination of ground and kurgan burials in the funeral rite in the Sredniy Stog culture. A kurgan mound is often considered as an indication of high social status of the deceased, because it demanded considerable temporal and working expenditures. But it is difficult to explain the existence of kurgan mounds in the Eneolithic only on the basis of social status of the deceased. The burials with numerous grave goods and well-decorated funeral clothes, as well as the burials with poor inventory and without adornments, were found in the kurgans and ground cemeteries.

Simultaneous use of ground and kurgan burials can’t be also explained by the gradual transition from the burials in the large cemeteries to the individual burials under kurgans, because ground burials were widely used during all period of the Eneolithic, Bronze Age and following times. In my opinion, the main explanation of the existence of such biritualism in the rite is the territorial affixment of the burial. The majority of ground cemeteries was situated near the settlements, such as Igren, Petro-Svistunovo and others. They are also encountered in the steppe between the Don and Dnieper - on the native territory of Sredniy Stog population. Small mounds above the burials near the settlements assisted in orientation in the planigraphy of necropolis.

Some of the kurgan Sredniy Stog burials were found outside the main area of concentration of settlements, where only the influence of traditions of that culture was traced (Veselaja Roscha, Komarovo, Kainary, Suvorovo, etc). Perhaps, the burials in the kurgans were left by those groups of Sredniy Stog population, which maintained intensive contacts with the bearers of Tripolye, Gumelnitsa, Varna, Tisapolgar cultures in the west and the inhabitants of Northern Caucasus in the south-east. This assumption is testified by the presence of imported vessels (Komarovo, Kainary, Giurgiulesti, Decea Muresului) in the kurgan burials. During the expeditions, connected with the exchange, people could take with them only small numbers of their pottery and they did not made it during their travels. Therefore they could leave in the burial the vessel of those people, on whose territory they were situated, attending a funeral.

Other burials in the kurgans were concentrated, mainly, in the Don basin. I can suggest, that these mounds were made above the burials, which situated far from the clan cemeteries, in other words, outside the main area of living of specific community. Kurgans could be situated on the territory, which was visited from time to time, and therefore it was necessary to made mounds above the burials for their best fixation. It’s interesting, that the majority of such kurgan burials were situated far from the valley of Don, where all known settlements are concentrated.

Thus the studying of the monuments of Sredniy Stog culture allows me to suggest, that the social structure of its population was similar to the archaic

tribe. Tribe included some clans and the small community was the main territorial and production unit. The funeral clothes reflected the gender-age differentiation of Sredniy Stog population, and the burials of the leaders of communities were accompanied with the symbols of power in the form of different heads according to the materials of the burial grounds. As a whole, the social organization of the Sredniy Stog population was similar to this one of the Late Neolithic population of the Lower Don and Azov-Dnieper cultures. The main difference was related to the contacts of the Sredniy Stog population with the Tripolye and Gumelnitsa population with more developed social structure, which also caused marriage contacts. The second difference was related to the blossoming of prestigious exchange, which was caused by the appearance of metal and artifacts from it.

CONCLUSION

Detailed characteristic of the monuments of the Early Eneolithic of Pontic steppe was directed to giving an insight into the source of numerous cultural-chronological schemes of the development of the steppe Eneolithic, which have existed for this moment. The most important part of this research is related to the full publication of settlement materials. The stratigraphy of settlements has become the basis of the periodization, while collections of ceramics, tools and adornments have given a crucial insight into the main categories of material culture of the Early Eneolithic population.

The Early Eneolithic monuments of the Black Sea steppe are divided into several groups: the settlements of the third layer of Strilcha Skelja and the second layer of Sredniy Stog types, as well as ground burials of Novodanilovka type and group of kurgan burials. Analysis of the archaeological assemblages has shown, that there was some similarity and even some genetic connections between the sites of the third layer of Strilcha Skelja and monuments of the second layer of Sredniy Stog types. Therefore they were considered as the two periods of development of the same culture. The term “Sredniy Stog culture” has been preserved because of the wide use of this term.

Studying of ground and kurgan burials has demonstrated, that they were synchronous to the Sredniy Stog sites and existed on the same territory. Their grave goods are similar to the settlements materials. All these facts have allowed me to relate them, as well as the settlements, to the Sredniy Stog culture.

Using the term “Sredniy Stog culture” I have not related monuments of the Middle Eneolithic, such as the Dereivka settlement, to it, as D.J.Telegin and other authors did (Телегін 1973; Телегин, Нечитайло, Потехина, Панченко 2001, etc.) I think it is more valid to analyze them in the context of separate Dereivka culture (Санжаров, Бритюк, Котова, Черных 2000).

The main territory of distribution of the Sredniy Stog culture was the steppe between the Don and Dnieper and Severskiy Donets basins, where sites and burials have been investigated. On the other territories from Northern Caucasus to the Danube only the Sredniy Stog burials have been excavated.

Fundamental analysis of different categories of material culture and burial rite has allowed me to trace some local features of the monuments and distinguish two variants: eastern - in the Don-Kalmius interfluve, the Severskiy Donets basin and western - in steppe between the Dnieper and the Kalmius. Specificity of variants was caused by the origins of their traditions and influence of cultural environment: the Azov-Dnieper and Tripolye cultures in the case of the western population, the Khvalynsk and Northern Caucasus traditions in the case of eastern variant.

Monuments of local variants differed in number of details despite of the general similarity of material. For example, pottery of every variant, which had some features, typical for all culture (clay with shell admixture, dominating pottery with point bottom, ornamentation from drawn lines, strokes and comb imprints), also has some specifics. Some flat bottom vessels have been known at the sites of eastern variant; the comb prints were used widely in the ornamentation; strokes were used, mainly, for the division of ornamental zones made of drawn lines. Ornamentation was made on the upper half of vessel, including neck.

The vessels with the flat bottom have been not typical in the western variant; comb stamp was widely used only during the third period; strokes were used more often than in the eastern monuments. Ornamentation was primarily made on the shoulders. The necks had no ornamentation or there was only a narrow strip on them upper parts.

The specificity of development of the flint complex has been traced. The transition from the tools on blades to the tools on flakes was fixed for the eastern variant. The population of the western variant was used, mainly, the blades during all periods of their existence.

There also were some regional specifics in the burial rite, which nevertheless had some common features, such as the prevalence of the flexed burials, wide distribution of blades in the grave goods and similar types of adornments (nacre, bone and copper beads, copper pendants, pectorals from boar fangs). For example, the woodworking tools were much frequent in the inventory of the eastern variant, while the stone beads; pendants from red deer teeth and their imitations; plates-braids from boar fangs were typical for its burial clothes. Population of the western variant was not used listed types of adornments, applied bone beads rarely and preferred large nacre beads (the diameter was larger, than 20 mm), while the population of eastern variant decorated their clothes with the nacre beads with the small and medium diameters. The belts from numerous nacre beads were typical for the ceremonial clothes of the western variant and uncommon in the eastern region.

Lesser diversity of funeral costumes and their standardization were typical for the western variant of the Sredniy Stog culture in the comparison with the eastern variant. Some differences in the age-gender affixments of the funeral clothes can be traced. If the clothes with numerous decorated details were typical for the children costumes of the eastern variant, than the majority of kids in the western variant had only decorated belts.

The chronology of the Sredniy Stog culture is built on the basis of the series of radiocarbon dates, which was received in the first time and expanded with the help of synchronization with the Tripolye culture settlements. The stratigraphy of the settlements and correlation of the burials with this stratigraphy on the basis of the radiocarbon dating and comparison of the burial inventory with the settlements materials have become the basis of periodization. Three periods in the development of the Sredniy Stog culture have been distinguished.

The monuments of the eastern variant were the oldest. Its first period is dated about 5300-4800 BC. The monuments of the western variant appeared later. Its first period is dated about 5050-4800 BC. The monuments of the second period of the both variants were synchronous, and their age is determined about 4800-4350/4300 BC. The third period of the western variant is dated about 4350/4300-4250 BC. The monuments of the eastern variant of the Sredniy Stog culture, perhaps, existed till 4200/4100 BC.

The stratigraphy of the Razdorskoe settlement, where three successive layers of the Sredniy Stog culture were traced, has been laid in the basis of periodization of the eastern variant. The first period of the eastern variant has included the fourth layer of Razdorskoe, Tzimlanskoe site, the Razdolnoe settlement (the trench V), Mariupol and Karataevo cemeteries and kurgan burials near stanitsa Staronizhesteblievskaja. The first period was, mainly, synchronous to the period A of the Tripolye culture.

The vessels with short necks, which were sometimes made in the form of collar, the drawn-strokes or, in some cases, comb ornamentation and tools on blades were typical for it. The burial clothes of the first period included head-dress, decorated with the pendants from deer teeth and beads from different materials. The collar was embroidered with plates from boar fangs, perhaps, with the beads. There were beads on the throats. The plates from boar fangs were sewed on the belt, while a lot of beads and animal teeth were fixed on its ends. The beads were also fixed to the laps of shirts. There were also the bracelets on the hands. As a whole, the set of adornments and system of their arrangement were similar to those ones in the previous Lower Don Neolithic culture.

The second period has been represented with materials of the lower horizon of the fifth layer of Razdorskoe and Sredniy Stog layer of Razdolnoe (the trench

III). I can also relate to it the following monuments: the ground burials near stanitsa Bessergenovskaja; burial 4 of Liventsovka; Donetsk; Chongrad; Alexandrovsk, Giurgiulesti, Yama and Lugansk cemeteries; such burials in the kurgans, as burials 14, 15, 17, 20 in kurgan 3 of Baturinskaja, burial 11 of Verkhniy Akbash; burial 15 in kurgan 1 of Veselaya Roscha; burial 6, kurgan 1 of Moskva 1; burial 6 in kurgan 1 of Mukhin; burials 9 and 30 in kurgan 5 of Mukhin 2; burials 27 and 33 in kurgan 5 from Koisug; burial 9 in kurgan 7 and burial 18 in kurgan 2 of Komarovo; burials 8 and 17 in kurgan 5 of Krasnogorovka; burials 27, 28, 31, 32 in kurgan 9 near khutor Popov; Tuzluki; burial 4 in kurgan 1 of Suvorovskaja and, perhaps, burial 3 in kurgan 24 of Veselaja Roscha 3.

The monuments of the second period were synchronized with the end of period A and period B I of the Tripolye culture. The preservation of the previous form of ceramics with the wide use of flakes for making tools was typical for their material culture. The dead were still accompanied with flint blades. The burial clothes with the head-dress, decorated with beads, become less frequent in the comparison with the first period. The beads were replaced with temporal rings and solitary metal pendants. The plates-braids from boar fangs disappeared from collars, which were decorated with the splintered fangs with hollows for fixing. The breast was decorated with nacre, bone and stone beads and pendants. Among the new breast adornments were the copper plaques and pectorals from splintered boar fangs, which, sometimes, and copper pendants. It is interesting, that the adornments for the belt have not been known for the second period. The disposition of ornaments in the lower part of pelvis has allowed me to suggest, that there were adornments of the laps, which were embroidered with beads. We should also mention, that the adornment of the lap, which reached to the ankles, was fixed for the first time. The bracelets were also used more frequent in the comparison with the first period.

The third period have included the upper horizon of the fifth layer of Razdorskoe, Samsonovka, Alexandria, Serebrjanskoe, Chernikovo ozero 1, burial 7 in kurgan 5 of Mukhin 2, burial 6 in kurgan 2 of Mokry Chaltyr and burials of Semenkin. Those monuments were synchronous to the Tripolye B I-II. The tools on flakes and the increase in the numbers of the vessels with the high throats together with the preservation of the oldest ornamentation were typical for them. There is no information about the clothes adornments of the third period.

The periodization of monuments of the western variant has been based, mainly, on the radiocarbon dates and stratigraphy of the Strilcha Skelja site, where two Sredniy Stog layers were fixed. The burials of the Krivoy Rog cemetery with the radiocarbon dates have indicated, that the Sredniy Stog population lived in the steppe basin of Dnieper about 5100-4800 BC. They related to the first period and were synchronous with the Tripolye A – Precucuteni 3. Nowadays any settlements of that time have not been known. It was possible, that the small groups of Sredniy Stog population only began to settle on that territory, co-existing with the local inhabitants – bearers of the second period of Azov-Dnieper culture.

Adornments of that period included the nacre beads of middle size; copper ring-like beads; pendants from sea shells, copper and gold; copper bracelets. The burial clothes of the first period of the western variant were similar to the clothes of the second period of the eastern variant in regularities of location of adornments (the breast, which was adorned with the beads; the pendants instead the beads or plates of the head-dress; absence of the belts with plates from the boar fangs).

The second period united the upper layer of Semenovka, the third ceramic layer of Kamennaja Mogila I, the third layer of Strilcha Skelja, Kislevy, some materials from Vinogradny, the Chapli, Petro-Svistunovo and Novodanilovka cemeteries, early burials of the Igren cemetery, kurgan burials of Kut and Nizniy Rogachik. The population of the second period also left ground burials of Decea Muresului, Reka Devna, Kulevcha, Lugoch and some kurgan burials (the burial 7 in kurgan 1 of Suvorovo, Kainary and Gonova Mogila), which were located

outside the main territory of the Sredniy Stog culture. These monuments were synchronous, mainly, with the Tripolye B I.

Pottery with the point bottom, low throat, drawn-stroked and very rare comb and interweaved cord imprints was typical for that period. The majority of tools were made on the blades. There were a lot of copper beads, pendants, bracelets, and belts with nacre beads among the adornments. Wide distribution of the clothes with decorated belts could be considered as the specific feature of the funeral clothes of the second period.

The third period included settlements on the Kodachek island, the second layer of the Sredniy Stog, the fourth layer of Strilcha Skelja, some materials of Zolotaja Balka, Sobachki; the burial of Vinogradnoe, some burials of the Igren and Falciu cemeteries. These monuments were synchronized with the Tripolye B I-II. The pottery with the high throat sometimes made in the form of the collar; oblique inward rim; imprints of the comb stamps and interweaved cord were typical for them. The tools were made of the blades and flakes. There were only a few copper finds among the adornments, which was caused by the collapse of Balkan-Carpathian metallurgical province.

The population of the Sredniy Stog culture, which lived in the steppe area, depended greatly on the changes of natural-climatic conditions. Contemporary data have shown, that there were huge fluctuations of the climatic moistening, which affected economical and cultural life of the steppe inhabitants. The beginning of the formation of the Sredniy Stog culture was connected with the aridity of the climate about 5300 BC, which caused some worsening of the conditions of living and disrupted the traditional way of life of the Surskaya and Lower Don population of the Late Neolithic. It resulted in the formation of the new Sredniy Stog culture on the basis of their traditions. Long existence side by side and close contacts, which were traced between the Surskaya and Lower Don population, also contributed to it. Perhaps, the aridity of climate created stressful economical situation. The adaptation to the new natural-climatic conditions included the changes in culture of the steppe population. The contacts with the population of Balkan-Carpathian region also assisted to it.

The Khvalynsk Eneolithic culture was also formed about 5250-5150 BC. The traditions of the group of the Early Sredniy Stog population of the Don basin, which had to migrate during the aridity to the northern regions along the valleys of Don, Medveditsa and right bank of Volga, became its basis. The population of Sredniy Stog encountered the local population of the Late Neolithic Orlovka culture on the right bank of Volga and, perhaps, assimilated some of its groups, as well as southern groups of the Samara culture population. As the result of those complex processes, the Khvalynsk culture was formed about 5150 BC. I should agree with the I.B.Vasiliev, who distinguished Khvalynsk-Sredniy Stog cultural-historical area on the basis of the similarity of funeral rite, ceramics, tools, weapons and adornments. It existed during 5150-4200 BC. The border between Khvalynsk and Sredniy Stog cultures, perhaps, passed in the Don-Volga interfluve.

The establishment of relations between the steppe population and the bearers of Balkan-Danube region as well as the representatives of Tripolye assisted in formation of the new Eneolithic cultures in the steppe Eastern Europe. The first metal artifacts appeared in steppe because of those contacts and, perhaps, the tradition of the wide use of stone in the funeral rite (stone groups under the graves and stone boxes); complicated burial pits with alcovs and flanges; flexed position of burials, which replaced stretched out skeletons of the steppe Neolithic population, distributed due to the Tripolye and Balkan-Carpathian influences. The bearers of the forming Sredniy Stog culture could oppose themselves to the old traditions, including changes in the skeleton positions.

Cultural changes in the Dnieper-Kalmius interfluve, which were caused by the dehydration of climate, began later, than in the western region, and

coincided with the peak of aridity near 5200 BC. It was related to the wetter climate of the western regions of steppe zone, which softened the consequences of aridity. The aridity caused the migration of some part of the steppe population to the northern regions of steppe and the south of modern forest-steppe. Perhaps, the existence of Surskaya culture ended at that time and the transition from the first period of Azov-Dnieper culture to the second period occurred. The changes in the Azov-Dnieper culture were caused by the influence of traditions of the Kiev-Cherkassy population of the forest-steppe Dnieper, the contacts with which strengthened during the aridity of climate.

The minor humidifying of climate about 5050-4800 BC created favorable conditions for dwelling in the south of steppe zone, that has caused the growth of population in these areas. The Khvalynsk culture population migrated to the south and reached of the Lower Volga and Caspian Sea region. The Sredniy Stog culture population settled to the west in the Dnieper-Kalmius interfluve, where the first Sredniy Stog cemeteries with the flexed burials (Krivoy Rog cemetery) appeared among the monuments of the second period of Azov-Dnieper culture. It was the beginning of formation of the western variant of Sredniy Stog culture, the bearers of which gradually assimilated the Azov-Dnieper population to 4800-4750 BC (the peak of new climate aridity) and adopted some of their traditions, including making of sacrificial grounds on the surface of ground burials.

The aridity of climate, which began about 4400 BC, played an important role in the cultural development of the Sredniy Stog population. It forced some of inhabitants of the eastern variant to migrate to the west in the steppe Dnieper basin, where dehydration of climate was milder. At the same time, some part of the western variant population migrated to the south areas of forest-steppe. Due to those migrations, the monuments of the third period of the western variant of Sredniy Stog culture formed.

This aridity also caused the formation of the Dereivka culture of the Middle Eneolithic in the south of modern forest-steppe Dnieper basin. The synthesis of traditions of migrants (separate groups of population of the western variant of Sredniy Stog culture), and the local Late Neolithic populations (the representatives of Azov-Dnieper and Kiev-Cherkassy cultures), lied in the basis of new Dereivka culture. The development of Dereivka population passed in the most favorable conditions on the border between steppe and forest-steppe, where the climate was quite damp.

The worst conditions of life had the representatives of Sredniy Stog population, who stayed in the southern and middle parts of steppe area. It, perhaps, caused the small numbers of the youngest Sredniy Stog monuments.

The minor moistening of climate about 4250-4150 BC contributed to the migration of the population of Dereivka culture to the south. The migrants gradually assimilated the small groups of bearers of western variant of the Sredniy Stog culture, which left the monuments of its third period.

An important role in the development of steppe Eneolithic population played its contacts with the Tripolye culture. They began immediately after the appearance of Tripolye settlements in the Dniester basin (the beginning of Tripolye A), when the Late Azov-Dnieper and Early Sredniy Stog population contacted with newcomers. But the contacts in that period weren’t very active, which is testified by the small numbers of pottery with steppe features at the Tripolye settlements and not numerous imitations of Tripolye ceramics in the materials of eastern variant of the Sredniy Stog culture. I can suggest only some prestigious exchange for that period.

The closer contacts of the Sredniy Stog and Tripolye population have been traced in the forest-steppe zone of the Dniester and South Bug basins and the Bug-Dniester interfluve in the end of period A and during the period B I of the Tripolye culture. Perhaps, during that period the conjugal ties become frequent, that caused the distribution of pottery with the Tripolye features at the

Sredniy Stog sites and coarse ceramics with shell inclusions at the Tripolye settlements.

Both sides were interested in the closer contacts. The Tripolye population, which gradually moved to the east through the forest-steppe area and occupied the territories of local Neolithic population, wanted some allies among their steppe neighbors, who lived in the other natural-climatic area, which wasn't interesting for the newcomers. The steppe population was interested in the mediation from the side of Tripolye population for the receiving of metal and metal artifacts. Perhaps, conjugal ties made the education of steppe craftsmen and distribution of steppe exchange expedition to the Balkan-Carpathian region easier. Therefore the ceramics with Sredniy Stog features was more typical for the Tripolye settlements of period B I in the Dniester basin, than for the settlements in the basin of South Bug and the Bug-Dnieper interfluve, in spite of their location closer to the territory of the Sredniy Stog population. The Dniester basin, in particular, was one the most important regions, where the road of exchange expeditions of steppe population to the Balkan-Carpathian region for the metal, laid. And the relatives in that region were really necessary.

There was the necessity of relations with the Tripolye population of the Dniester basin during the period B I-II become greater, because, according to the N.V.Ryndina's opinion (Рындина 1998), metal from the Transylvanian and Hungarian mines began to arrive. The growth of numbers of ceramics with shells at the Tripolye settlements of that region also testifies the strengthening of relations. But the contacts of the Tripolye and steppe population over a long period of time in the Bug-Dniestr interfluve also caused the strengthening of relations, which resulted in the growth of numbers of the pottery with the Sredniy Stog features at the Tripolye settlements (Vladimirovka, Vesely Kut, Miropolje, etc.)

According to the archaeological material the contacts of the Sredniy Stog population with the Early Eneolithic inhabitants of Northern Caucasus have been traced. But the conjugal ties become usual only to the third period of the Sredniy Stog culture, which is testified with the distribution of common type of ceramics at the Sredniy Stog and Northern Caucasus sites.

All available data about the economy of Sredniy Stog population are collected in this book. It had complex character and included cattle-breeding with the breeding of cattle, ovicaprids, pig and horse and agriculture with the cultivating of emmer, barley, millet, vetch ervilia and, perhaps, pea. The percentage of animals in the herd was determined by the natural-climatic conditions. During the periods of moistening there was a lot of cattle, while in the periods of aridity ovicaprids dominated.

The contribution of hunting in the supplying of meat food was minimal during the arid periods, but in the favorable humid time, when forests distributed along the valleys of rivers and watersheds, the role of hunting in life of steppe population increased. Among the objects of hunting were saiga, donkey, red deer aurochs, hare and fox.

One of the important branches of economy was metalworking, which formed under the influence of traditions of the Varna culture. The Sredniy Stog metalworking fixed the earliest stage of formation of that craft, which had seasonal nature and the blacksmiths made metal wares, when they were free from the agriculture and cattle-breeding activities.

The exchange played the important role in the life of Sredniy Stog population. Available materials allow me to suppose, that three systems of exchange, which are known on the ethnographical data, existed. The first system was represented with the intercommunal exchange inside of the Sredniy Stog culture. It usually took form of gift-exchange system because of the irregular distribution of natural resources. Flint raw material from the Severskiy Donets basin, salt and serpentinite from the south of steppe Dnieper basin and other goods could take part in it.

The exchange with the nearest neighbors, who belonged to the different cultures (the Tripolye, Khvalynsk, Kiev-Cherkassy, Donetsk cultures and Eneolithic population of Northern Caucasus and Crimea), represented the second system. Prestigious exchange, which played a social role, was the most important here, assisting in establishment of peaceful relations and contacts. Flit artifacts, adornments and salt could be used for the prestigious exchange from the side of the Sredniy Stog culture. The Northern Caucasus inhabitants could use obsidian, geshir and serpentinite as well as the products of agriculture during the aridity periods. The population of the western variant of Sredniy Stog culture could receive the last from the Tripolye culture.

The third exchange system was represented with the long distance exchange, which included the special expeditions predominantly in the Balkan-Carpathian region, in the search of the most prestigious things of Early Eneolithic – metal and metal artifacts. As a whole, the majority of the burials outside the main territory of the Sredniy Stog can be consider as the burials of the members of the expeditions, which were connected with the second and third exchange system. They could be made under kurgans, if they were situated far from the friendly villages, and without them, if they were made on the special territory, not far from the village of relatives by marriage. Perhaps, the Sredniy Stog population made such expeditions to the Lower Danube.

Study of the monuments of Sredniy Stog culture allows me to suggest, that the social structure of the population, which left them, was similar to the archaic tribe. Tribe included some clans and the small single-clan community represented the main territorial and production unit. Perhaps, the majority of the Sredniy Stog population belonged to the two main clans, which oriented their dead to the east and north.

Nine burials of the Sredniy Stog culture had symbols of power. Seven of them were discovered outside the main territory of distribution of that culture and, perhaps, were connected with the exchange expeditions. According to the ethnographical data, such expeditions were headed by the leaders of communities and, according to the weapons, which were found in those burials, we can suggest, that such leaders also were the warlords of the Sredniy Stog population.

As a whole, social organization of Sredniy Stog society was similar to that one of the Later Neolithic population of Lower Don and Azov-Dnieper culture. The main difference was related with the fact, that the Sredniy Stog population had contacts, including conjugal ties, with the Tripolye inhabitants, which had more developed social structure. The second difference was related with the blossoming of prestigious exchange, which was the result of the appearance of metal and metal artifacts.

Further study of the monuments of Pontic steppe can allow us to specify and enlarge our knowledge about the Early Eneolithic of this region. It would be connected, mainly, with the full publication of the materials of Lower Don and excavations in the Don-Kalmius interfluve, where the oldest Sredniy Stog monuments were localized. The problem of revealing and researching of the oldest settlements of the Sredniy Stog culture in the Molochnaja-Dnieper interfluve, where only burials could be related to the first period now, is also important.

Undoubtedly, that new materials of the Early Eneolithic of steppe area in Eastern Europe would correlate the cultural-chronological scheme, which was suggested there. But now this book and, first at all, the publication of settlement materials, can help in the specification of different research questions, which became really debatable in the last years.

BIBLIOGRAPHY

Агапов С.А., Васильев И.Б., Пестрикова В.И. Хвалынский энеолитический могильник. – Куйбышев, 1990.

Алексеева И.Л. Курганы эпохи палеометалла в Северо-Западном Причерноморье. - Киев, 1992.

Астафьев А.Е. Новые материалы с полуострова Мангышлак// Неолит и энеолит Северного Прикаспия. – Куйбышев, 1989.

Барынкин П.П. Энеолитический памятник Каир-Шак VI из южной части Волго-Уральского междуречья // Неолит и энеолит Северного Прикаспия. – Куйбышев, 1989.

Барынкин П.П., Козин Е.В. Природно-климатические и культурно-демографические процессы в Северном Прикаспии в раннем и среднем голоцене (краткие итоги исследования)// Проблемы древней истории Северного Прикаспия. – Самара, 1998.

Безусько Л.Г., Безусько А.Г., Котова Н.С., Мосякин Л.Н. Палинологична характеристика відкладів енеоліту багатошарового поселення Раздольне (Україна) // Український ботаничний журнал. - 2006. - Т.63. - №6.

Безусько Л.Г., Котова Н.С., Ковалюх Н.Н. Население эпохи неолита - раннего энеолита Западного Приазовья и окружающая среда// Старожитності степового Причорномор”я і Криму. - Вип.VШ. – Запоріжжя, 2001.

Бодянский А.В. Лысогорский неолитический могильник// Краткие сообщения Института археологии Академии наук Украинской ССР. – Вып.II. – Киев, 1961.

Братченко С.Н., Константинеску Л.Ф. Александровский энеолитический могильник// Древнейшие скотоводы степей юга Украины. - Киев, 1987.

Братченко С.Н., Шарафутдинова Э.С. Ливенцовский 1 могильник // Историко-археологические исследования в Азове и на Нижнем Дону в 1998 г. – Азов, 2000.

Бодянський О.В. Енеолітичний могильник біля с. Петро-Свистунове// Археологія. - т. ХХI. - 1968.

Васильев И.Б. Энеолит Поволжья (степь и лесостепь). - Куйбышев, 1981.

Васильев И.Б., Выборнов А.А. Неолит Поволжья (степь и лесостепь). – Куйбышев, 1988.

Васильев И.Б., Овчинникова Н.В. Развитый энеолит// История Самарского Поволжья с древнейших времен до наших дней. Каменный век. – Самара, 2000.

Васильев И.Б., Синюк А.Т. Энеолит Восточно-Европейской лесостепи. – Куйбышев, 1985.

Видейко М.Ю. Вопросы взаимодействия «земледельческого» и «скотоводческого» населения Северного Причерноморья в эпоху энеолита// Краткие сообщения Одесского археологического общества. – Одесса, 1999.

Відейко М.Ю. Нова хронологія Кукутені-Трипілля// Трипільська цивілізація у спадщині України. – Київ, 2004.

Виноградова Н.М. Племена Днестровско-Прутского междуречья в период расцвета трипольской культуры. – Кишинев, 1983.

Власкин М.В. Исследование курганного могильника Мухин 1 в 1995, 1996 гг.// Аксайские древности. – Ростов-на-Дону, 2002.

Гей А.Н. Самсоновское поселение// Древности Дона – Москва, 1983.

Генинг В.В., Генинг В.Ф. Метод определения древних традиций ориентировок погребенных по сторонам горизонта// Археология и методы исторических реконструкций. – Киев, 1985.

Гиджрати Н.И. Новые данные о каменном веке Северной Осетии // Новые материалы археологии Центрального Кавказа. - Орджоникидзе, 1986.

Гиренко Н.М. Социология племени. – Ленинград, 1991.

Гохман И.И. Население Украины в эпоху мезолита и неолита. – Москва, 1966.

Даниленко В.Н. Энеолит Украины. – Киев, 1974.

Даниленко В.М. Кам'яна Могила. - Київ, 1986.

Даниленко В.М., Шмаглій М.М. Про один поворотний момент в історії енеолітичного населення Південої Європи// Археологія. – Вип.6. – 1972.

Дергачев В.А. Молдавия и соседние территории в эпоху бронзы. - Кишинев, 1986.

Дергачев В.А. Особенности культурно-исторического развития Карпато-Поднестровья // Stratum plus. – Вып.2. - 1999.

Дергачев В.А. Два этюда в защиту миграционной концепции // Stratum plus. – Вып.2. - 2000.

Державин В.Л. Погребения эпохи бронзы из курганов у хутора Веселая Роща (по материалам Ставропольской экспедиции 1980 г.)// Древности Ставрополья. – Москва, 1989.

Добровольский А. Звіт за археологічні досліди на теріторії Дніпрельстану р. 1927 // Дніпропетровський історично-археологічний музей. - Дніпропетровськ, 1929.

Добровольський А.В. Восьма Ігріньська неолітична стоянка// Археологічні пам'ятки УССР. – Т.П. - Киев, 1949.

Добровольський А.В. Могильник в с. Чаплі // Археологія. – Т.IX.- 1954.

Жеребилов С.Е. Нижний Дон: от памятников новоданиловского типа к скелянской культуре // Проблемы археологии Юго-Восточной Европы. – Ростов-на Дону, 1998.

Журавлев О.П. Костные остатки млекопитающих из поселения Семеновка 1// Проблемы археологии и архитектуры. – Т.1. – Археология. – Донецк-Макеевка, 2001.

Журавльов О.П. Тваринництво та мисливство у трипільських племен на території України // Енциклопедія Трипільської цивілізації. – Київ, 2004.

Збенович В.Г. Енеоліт Північно-Західного Причорномор'я // Матеріли з антропології України. – Вип.7. – Київ, 1973.

Збенович В.Г. Ранний этап Трипольской культуры на территории Украины. - Киев, 1989.

Кабо В.Р. Первобытная доземледельческая община. – Москва, 1986.

Кияшко В.Я. Константиновское поселение и памятники степного энеолита // Проблемы эпохи энеолита степной и лесостепной полосы Восточной Европы. – Оренбург, 1980.

Кияшко В.Я. Многослойное поселение Раздорское 1 на Нижнем Дону // Краткие сообщения Института археологии Академии наук СССР. - №192. - 1987.

Кияшко В.Я. Между камнем и бронзой // Донские древности. - Вып.3. - Азов, 1994.

Ковалева И.Ф. Север степного Причерноморья в энеолите-бронзовом веке. – Днепропетровск, 1984.

Кореневский С.Н. Поселение "Замок" у города Кисловодска (нижний слой) // Материалы по изучению историко-культурного наследия Северного Кавказа. - Ставрополь, 1998.

Кореневский С.Н. Радиокарбонная хронология памятников триполья, энеолита, раннего периода бронзового века Предкавказья в сравнении на фоне климатических изменений схемы Блитта-Сернандера // Тезисы докладов первого всемирного конгресса «Трипольская цивилизация». – Киев, 2004.

Кореневский С.Н., Петренко В.Г., Романовская М.А. Работы Ставропольской экспедиции // Краткие сообщения Института археологии Академии наук СССР. - №188. - 1986.

Кореневский С.Н., Наглер А.О. Некоторые вопросы изучения энеолита Центрального Предкавказья и Моздокских степей // Проблемы интерпретации археологических источников. – Орджоникидзе, 1987.

Кореневский С.Н., Калмыков А.А. Древнейшие подбои и катакомбы Предкавказья // Древний Кавказ: ретроспекция культур. – Москва, 2004.

Котова Н.С. Мариупольская культурно-историческая область (Днепро-Донское междуречье)// Археологічні пам’ятки та історія стародавнього населення України. - Вип.1. – Луцьк, 1994.

Котова Н.С. Скелянська культура // Словник-довідник з археології. – Київ, 1996.

Котова Н.С. Неолітична епоха // Давня історія України. – Київ, 1997.

Котова Н.С. Энеолитические материалы поселения и могильника у хутора Александрия на реке Оскол // Материалы и исследования по археологии Восточной Украины. – Вып.1. - Луганск, 2003.

Котова Н.С. Бассейн Северского Донца в эпоху энеолита // Материалы и исследования по археологии Восточной Украины. – Вып.3. - Луганск, 2004.

Котова Н.С. Игреньский энеолитический могильник // Збірка на пошану С.С.Березанської. – Київ, 2005.

Котова Н.С., Тубольцев О.В. Реконструкция погребальной одежды неолитического населения Украины // Российская археология. - №3. – 1999.

Котова Н.С., Тубольцев О.В. Новые памятники эпохи неолита и энеолита у города Мелитополя // Проблемы археологии и архитектуры. – Т.1. - Археология. - Донецк, 2001.

Крадин Н.Н. Вождество: современное состояние и проблемы изучения // Ранние формы политической организации. – Москва, 1995.

Кричевский Е.Ю., Круглов А.П. Неолитическое поселение близ Нальчика // Материалы и исследования по археологии СССР. – №3. - Москва – Ленинград, 1941.

Круглов А.П., Пиотровский Б.Б., Подгаецкий Г.В. Могильник в г.Нальчике // Материалы и исследования по археологии СССР. – №3. - Москва – Ленинград, 1941.

Лаврушин Ю.А., Спиридонова Е.А., Сулержицкий Л.Д. Геолого-палеологические события севера аридной зоны в последние 10 тыс. лет // Проблемы древней истории Северного Прикаспия. - Самара, 1998.

Ловпаче Н.Г. Унакозовские пещеры – памятник протомайкопской культуры // XVII «Крупновские чтения» по археологии Северного Кавказа. – Майкоп, 1992.

Ляшко С.Н. Энеолитические «вытянутые» погребения в Днепровском Надпорожье // Степное Поднепровье в бронзовом и раннем железном веках. – Днепропетровск, 1981.

Макаренко М.О. Маріюпільский могильник. – Київ, 1933.

Манзура И.В. Владеющие скипетрами // Stratum plus. – Вып.2. - 2000.

Миллер М.А. Памятники родового общества на Игреньском полуострове // Проблемы истории докапиталистических обществ. - №9-10. – 1935.

Милорадович О.В. Новые археологические находки в Грозненской области // Краткие сообщения Института истории материальной культуры. - Вып.64. - 1956.

Мирчев М. Три погребения от енеолитната епоха // Известия на варненско археологическо дружество. – Книга ХП. – Варна, 1961.

Мовша Т.Г. О связях племен трипольской культуры со степными племенами медного века // Советская археология. – 1961. – №2.

Мовша Т.Г. Зв'язки Трипілля-Кукутені зі степовими енеолітичними культурами //Записки наукового товариства імені Шевченка. - Т.ССХХХV. - Львів, 1998.

Мовша Т.Г. К проблеме взаимодействия древних земледельцев трипольско-кукутенской общности с носителями культур понтийских степей // Проблемы археологии Поднепровья. - Днепропетровск, 2000.

Мовша Т.Г., Петренко В.Г. О новоданиловских памятниках Нижнего Поднестровья и Подунавья // Краткие сообщения Одесского археологического общества. - Одесса, 1999.

Мовша Т.Г., Чеботаренко Г.Ф. Энеолитическое курганное погребение у ст. Кайнары в Молдавии // Краткие сообщения Института археологии Академии наук Украинской ССР. - №115. – 1969.

Мордкович В.Г. Степные экосистемы. – Новосибирск, 1982.

Мунчаев Р.М. Энеолит Кавказа // Энеолит СССР. - Москва, 1982.

Нехаев А.А. Новое поселение Майкопской культуры //Вопросы археологии Адыгеи. - Майкоп, 1983.

Нехаев А.А. Закубанская степь в эпоху раннего металла // Древности Кубани. - Краснодар, 1987.

Нехаев А.А. Домайкопская культура Северного Каказа // Археологические вести. - №1. – 1992.

Нечитайло А.Н. Суворовский курганный могильник. – Киев, 1979.

Нечитайло А.Л. Европейская степная общность в эпоху энеолита // Российская археология. - №4. – 1996.

Нечитайло А.Н. К проблеме выделения ливенцовской культуры // Древнейшие общности земледельцев и скотоводов Северного Причерноморья (V тыс. до н.э. - V век н.э.). – Тирасполь, 2002.

Нечитайло А.Л. Нижнедонские энеолитические комплексы в системе степной общности // Матеріалі та дослідження з археології східної України. – Вип.2. – Луганськ, 2004.

Нечитайло А.Л., Козюменко Е.В., Жеребилов С.Е. Новые погребальные памятники эпохи энеолита // Проблеми археолоії Подніпров'я. - Вип.1. - Дніпропетровськ, 1998.

Окладникова Е.А. Символы власти в традиционной культуре индейцев тихоокеанского побережья Северной америки // Символы и атрибуты власти. – Санкт-Петербург, 1996.

Палагута И.В. К проблеме связей Триполья-Кукутени с культурами энеолита степной зоны Северного Причерноморья // Советская археология. - №1. – 1998.

Підоплічко І.Г. Матеріали до вивчення минулих фаун УРСР. - Вип.1. - Київ, 1938.

Писларий И.А., Кротова А.А., Клочко Т.Н.. Погребение эпохи энеолита в г. Ворошиловграде// Энеолит и бронзовый век Украины. - Киев, 1976.

Потехина И.Д. Черепа из энеолитического могильника в г. Ворошиловграде// Энеолит и бронзовый век Украины. - Киев, 1976.

Потехина И.Д. Антропологические материалы из погребений раннего медного века в Унакозовской пещере // Археология Адыгеи. – Майкоп, 1995.

Потехина И.Д. Население Украины в эпоху неолита и раннего энеолита. – Киев, 1999.

Рассамакин Ю.Я. Энеолитические погребения бассейна р. Молочной // Древнейшие скотоводы степей юга Украины. – Киев, 1987.

Рассамакін Ю.Я. Світ скотарів// Давня історія України. – Т.1.- Київ, 1997.

Рассамакін Ю.Я., Будников О.Б. Проблеми раннього степового енеоліту у світлі вивчення нових пам'яток // Археологія. - №3. – 1993.

Рассамакин Ю.Я., Евдокимов Г.Л. Новый энеолитический могильник на р. Ингулец и проблема выделения «постстоговских» погребений // Археологический альманах. – Вып.10. – Донецк, 2001.

Романовская М.А. Об одном погребении эпохи ранней бронзы // Волго-Уральская степь и лесостепь в эпоху раннего металла. - Куйбышев, 1982.

Рындина Н.В. Древнейшее металлообрабатывающее производство Восточной Европы. – Москва, 1998.

Санжаров С.Н., Бритюк А.А., Котова С.Н., Черных Е.А. Поселения неолита - ранней бронзы Северского Донца. – Луганск, 2000.

Синюк А.Т. Энеолит лесостепного Дона // Энеолит Восточной Европы. – Куйбышев, 1980.

Скакун Н.Н., Самзун А., Матева Б. К вопросу о новых технологиях в кремнеобрабатывающем производстве в эпоху развитого Триполья // Тези доповідей міжнарожної науково-практичної конференції "Давні землероби Европи: нові відкриття та гіпотези". – Збараж, 2004.

Спиридонова Е.А., Лаврушин Ю.А. Корреляция геолого-палеоэкологических событий голоцена арктической, бораеальной и аридной зон Восточной Европы // Четвертичная геология и палеогеография России. - Москва, 1997.

Столяр А.Д. Раскопки курганов у хут. Попова в 1950-1951 гг. // Материалы и исследования по археологии. - №62. – Москва - Ленинград, 1958.

Сымонович Э.А. Раскопки могил возле с. Кошары на Тилигульском лимане // Материалы по археологии Северного Причерноморья. – Вып.4. – Одесса, 1962.

Телегин Д.Я. Энеолитическое поселение и могильник у хутора Александрия // Краткие сообщения Института археологии Академии наук Украинской ССР. - №9. – 1959.

Телегін Д.Я. Дніпро-донецька культура. - Київ, 1968.

Телегін Д.Я. Основні риси та хронологія Средньостогівської культури// Археологія. – т. ХХШ. – 1970.

Телегін Д.Я. Середньостогівська культура епохи міді. – Київ, 1973.

Телегин Д.Я. Среднестоговская культура и памятники новоданиловского типа в Поднепровье и степном Левобережье Украины // Археология Украинской ССР. – Т.1. - Киев, 1985.

Телегін Д.Я. Культурна належність і датування випростаних енеолітичних поховань Степового Подніпров'я // Археологія. - №60. – 1987.

Телегин Д.Я. Новые раскопки поселения Каменная Могила в Приазовье // Проблемы первобытной археологии Северного Причерноморья. - Херсон, 1990.

Телегин Д.Я. Неолитические могильники мариупольского типа. – Киев, 1991.

Телегин Д.Я., Филенко О.С. Могильник Среднестоговской культуры в Днепровском Надпорожье // Советская археология. - №1. – 1982.

Телегин Д.Я., Константинеску Л.Ф. Многослойное поселение на Стрильчей Скеле эпохи неолита-энеолита в Днепровском Надпорожье // Советская археология. - №1. - 1992.

Телегин Д.Я., Нечитайло А.Н., Потехина И.Д., Панченко Ю.В. Среднестоговская и новоданиловская культуры энеолита азово-черноморского региона. – Луганск, 2001.

Тимофеев В.И., Зайцева Г.И. К проблеме радиоуглеродной хронологии неолита степной и юга лесной зоны европейской части России и Сибири (обзор источников) // Радиоуглерод и археология. – Вып.2. – 1997.

Хазанов А.М. Кочевники и внешний мир. – Алма-Ата, 2002.

Цвек Е.В. Трипольские поселения Буго-Днепровского междуречья // Первобытная археология. Поиски и находки. – Киев, 1979.

Цвек О.В. Особливості формування східного регіону Трипільско-Кукутенської спільності // Археологія. - №51. – 1985.

Цвек. Е.В. Буго-днепровский вариант восточнотрипольской культуры (к проблеме выделения культур и локальных вариантов Триполья) // Первобытная археология. – Киев, 1989.

Цвек О.В. Гончарне виробництво племен трипільської культури // Енциклопедія Трипільскої цивілізації. – Київ, 2004.

Цвек Е.В., Рассамакин Ю.Я. Поселение восточнотрипольской культуры Мирополье и проблема относительной хронологии памятников типа Средний Стог 2 // Stratum plus. - №2. – 2001-2002.

Черных Е.Н. Первые спектральные исследования меди днепро-донецкой культуры // Краткие сообщения Института археологии Академии наук СССР. - №106. – 1966.

Черниш К.К. Ранньотрипільське поселення Ленківці на Середньому Дністрі. – Київ, 1959.

Шапошникова О.Г. Эпоха раннего металла в степной полосе Украины //Древнейшие скотоводы степей юга Украины. - Киев, 1987.

Шапошникова О.Г., Бодянський О.В. Капулівський енеолітичний могильник на Нижньому Дніпрі // Археологія. – Т.XXIV. – 1970.

Шарафутдинова Э.С. Новые материалы по эпохе энеолита и бронзы в степном Прикубанье // Краткие сообщения Института археологии Академии наук СССР. - №176. – 1983.

Шнирельман В.А. Позднеродовая община // История первобытного общества. Эпоха первобытной родовой общины. – Москва, 1986.

Шнирельман В.А. Производственные предпосылки разложения первобытного общества // История первобытного общества. Эпоха классообразования. – Москва, 1988.

Шумова В.О. Трипільське поселення Василівка на Середньому Дністрі // Археологія. – №1. – 1994.

Юдин А.И. Варфоломеевская стоянка и неолит степного Поволжья. – Саратов, 2004.

Dergačev B. Die äneolithishen und bronzezeitlichen Metallfunde aus Moldovien // Prähistorische Bronsefunde. Abteilung XX. Band 9. – Stuttgart, 2002.

Gimbutas M. Das Ende Alteuropas. Der Einfall von Steppennomaden aus Südrußland und die Indogermanisierung Mitteleuropas // Archaeolingua Alapítvány. - Budapest, 1994.

Govedarica B. Zepterträger – Herrscher der Steppen // Internationale Interakademische Kommission für die Erforschung der Vorgeschichte des Balkans. - Monographien Bd. VI. - Mainz am Rheim, 2004.

Haheu V., Kurciatov S. Cimitirul plan eneolitic de lÎngă satul Giurgiuleşti // Revista Arheologică. – №1. - 1993.

Klochko V.I. Weaponry of societies of the Northern Pontic culture circle: 5000-700 BC // Baltic-Pontic Studies. – Vol.12. – 2003.

Kotova N.S. Neolithization in Ukraine. – BAR International Series 1109. – Oxford, 2003.

Kotova N.S. First cattle-breeders of the steppe Ukraine (The Mesolithic-Early Eneolithic)// Nomadism and pastoralism between the Vistula and Dnieper rivers (Neolithic, Eneolithic, Bronze Age). Poznan, 2004.

Kotova N.S., Videiko M.Yu. The absolute chronology of Ukraine in Eneolithic // Zwischen Karpaten und Aegaeis. Neolithikum und aeltere Bronzezeit. Gedenkschrift fuer Viera Nemejcova-Pavukova. Internationale Archaeologie. - Studia honoria 21 (Rahden/Westfalen 2004).

Kovacs I. A Marosdécsei rézkori temetö // Közlemenyek. – IV. - 1-2. – 1944.

Mantu C-M. Cultura Cucuteni. – Piatra-Neamt, 1998.

Popuşoi E. Mormintele cu Ocru ge la Fălciu, judeţul Vaslui // Acta Moldaviae Meridionalis Vaslui. – Vol. IX-XI (1987-1989). – 1994.

Rassamakin Y.Y. The main directions of the development of Early pastoral societies of the Northen Pontic zone: 4500-2450 BC (Pre-Yamnaya culture and Yamnaya culture) // Baltic-Pontic Studies. – Vol.2. – 1994. - Poznan.

Rassamakin Y. The Eneolithic of the Black Sea Steppe: Dynamics of Cultural and Economic Development 4500-2300 BC // Late prehistoric exploitation of the Eurasian stepe. – Cambridge, 1999.

Rassamakin Y. Die nordpontishe Steppe in der Kupferzeit. – Mainz, 2004.

Rezepkin A.D. Das frühbronzezeitliche Gräberfeld von Klady und die Majkop-Kultur in Nordwestkaukasien // Archäologie in Eurasien. - Bd.10. - Rahden, 2000.

Telegin D.Ja., Kovaliukh N.N., Potekhina I.D., Lillie M. Chronology of Mariupol type cemeteries and subdivision of the Neolithic-Copper Age Cultures into periods for Ukraine// Radiocarbon and Archaeology. - №1. - 2000.

Vážarova Ź. Zoomorphes Zepter aus Kjulevča Bezirk Šumen // Studia Praehistorica. – №8. – 1986.

Archival materials

Добровольский А.В. Восьма Огріньська неолітична стоянка. - Научный архив Института археологии Национальной Академии Наук Украины. - Архив А.В.Добровольского, №4.

Телегин Д.Я. Исследование поселения и могильника позднейшего неолита-начала эпохи металла около с. Александрия на р. Осколе. - Научный архив Института археологии Национальной Академии Наук Украины. - 1956/4.

Телегин Д.Я. Исследование поселения и могильника энеолитического времени около с. Александрия на р. Осколе. - Научный архив Института археологии Национальной Академии Наук Украины. - 1957/4.

Телегин Д.Я. Отчет о командировке по обследованию памятников медного века у гг. Яма и Александрия в 1966 г. – Научный архив Института археологии Национальной Академии Наук Украины. – 1966/39.

Телегин Д.Я., Бодянский А.В., Козловский А.А., Балакин С.А., Нужный Д.Ю. Отчет о раскопках и разведках экспедиции “Славутич-2” в Надпорожье в 1978 году. - Научный архив Института археологии Национальной Академии Наук Украины. - 1978/7.

Телегин Д.Я., Зализняк Л.Л. Отчет об археологических исследованиях на Игреньской 8 стоянке в 1974 г. – Научный архив Института археологии Национальной Академии Наук Украины. - 1974/17.

Телегин Д.Я., Зализняк Л.Л., Нужный Д.Ю. Отчет об археологических исследованиях в Надпорожье и в Крыму в 1986 г. – Научный архив Института археологии Национальной Академии Наук Украины. - 1986/29.

Шаповалов Т.А. Отчет о разведках на территории Сталинской области в 1960 г. - Научный архив Института археологии Национальной Академии Наук Украины. - 1960/35.

Шепель Е.А. Население бассейна Северского Донца в эпоху энеолита-бронзы по антропологическим данным. – Рукопись диссертации на соискание степени кандидата исторических наук. – К., 1985. – Научный архив Института археологии Национальной Академии Наук Украины. - №641, ф-12.

Шмаглий Н.М., Черняков И.Т., Алексеева И.Л. Отчет об исследованиях Днестро-Дунайской (новостроечной) экспедиции Института археологии Академии наук УССР и Одесского археологического музея за 1970 г. // Научный архив Института археологии Национальной Академии Наук Украины. - 1970/40.

Illustrations

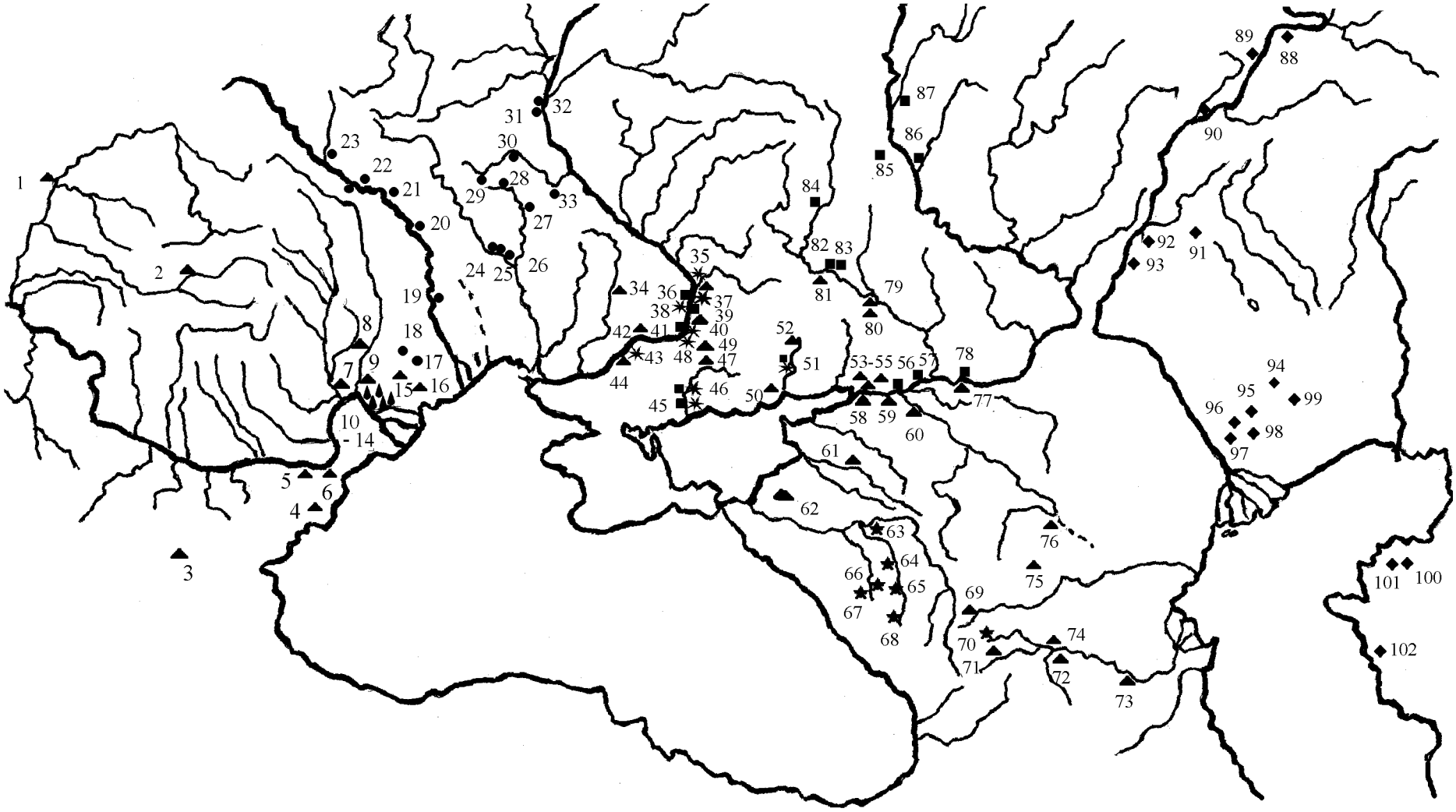

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Fig.1

Fig.1. Map of the Early Eneolithic monuments in the south of Eastern Europe. ● –monuments of the Tripolye culture, ▲ - settlements of the Bolgrad-Alden type, ▲ – burials of the Sredniy Stog culture, ■ - settlements of the Sredniy Stog culture, ✶ - monuments of the second period of the Azov-Dnieper culture, ★ - settlements of the Northern Caucasus, ◆ - monuments of the Khvalynsk culture.

1 – Chongrad, 2 – Decia Muresului, 3 – Gonova Mogila, 4 – Reka Devnja, 5 – Kulevcha, 6 – Kasimcha; 7 - Lugoch, 8 – Falciu, 9 – Guirgiulesti, 10 – 14 - Kokora, Lopatsika, Nagornoe, Vulkaneshty, Bolgrad, 15 – Kajnary, 16 - Suvorovo, 17 – Novye Ruseshty, 18 - Karbuna, 19 - Zhury, 20 - Soloncheny 2, 21 - Bernashevka, 22 – Luka-Vrublevetskaja, Lenkovtsy, 23 - Kadievtsy, 24 – Berezovskaja HPS, 25 - Grenovka, 26 - Sabatinovka, 27 – Vesely Kut, 28 – Krasnostavka, 29 - Borisovka, 30 - Shkarovka, 31 - Veremie, 32 - Tripolye, 33 - Miropolie, 34 – Krivoy Rog, 35 – Igren and Chaply cemeteries, 36 – Кodachek, Strilcha Skelja, 37 – Vovnigi sites, Yasinovatka 1 cemetery, 38 – Nikolskiy cemetery, 39 – Vinogradny, 40 – Petro-Svistunovo, 41 – Sredniy Stog, Sobachki, Vovchok, 42 - Kut, Zolotaja Balka, 43 – Kairy, 44 – Nizhniy Rogachik, 45 – Semenovka, 46 – Kamennaja Mogila, 47 – Vinogradnoe kurgan 3, 48 – Lysogorsky cemetery, 49 – Novodanilovka cemetery, 50 – Mariupol cemetery, 51 - Rasdolnoe, 52 – Donetsk, 53 – 55 – Mokry Chaltyr, Karataevo, Liventsovka, Muchin 1 и 2, 56 - Razdorskoe 1, 57 – Samsonovka, 58 – Krasnogorovka, Koisug, 59 – Tuzluki, 60 – Moskva, 61 – Baturinskaja, 62 – Staronizhesteblievskaja, 63 - Svobodnoe, 64 – Yasenova Poljana, 65 – Kamennomostskaja cave, 66 – Khadzhokh, 67 - Meshoko, 68 – Khutor Vesely, 69 – Suvorovskaja, 70 - Zamok, 71 – Nalchik, 72 – Verkhny Akbash, 73 – Grozny, 74 - Komarovo, 75 – Veselaja Roscha, 76 – Chogray, 77 – Popov, 78 – Tsimljanskoe, 79 – Alexsandrovsk cemetery, 80 - Lugansk, 81 – Yama cemetery, 82 - Serebrjanskoe, 83 – Chernikovo ozero, 84 - Alexsandria, 85 - Kopanische, 86 – Cherkasskoe, 87 - Universitetskaja 3, 88 – Krivoluchie, 89 – Khvalynsk 1 and 2 cemeteries, 90 – Khlopkovo cemetery, 91 - Kumyska, 92 – Politotdelskoe, 93 - Berezhnovka, 94 – Istay, 95 – Tau-Tube, 96 – Kara-Kuduk, 97 – Dosang, 98 – Kair-Shak, 99 - Koshalak, 100 - Shebir 4, 101 – Bas-Ortasha, 102 – Koskuduk.

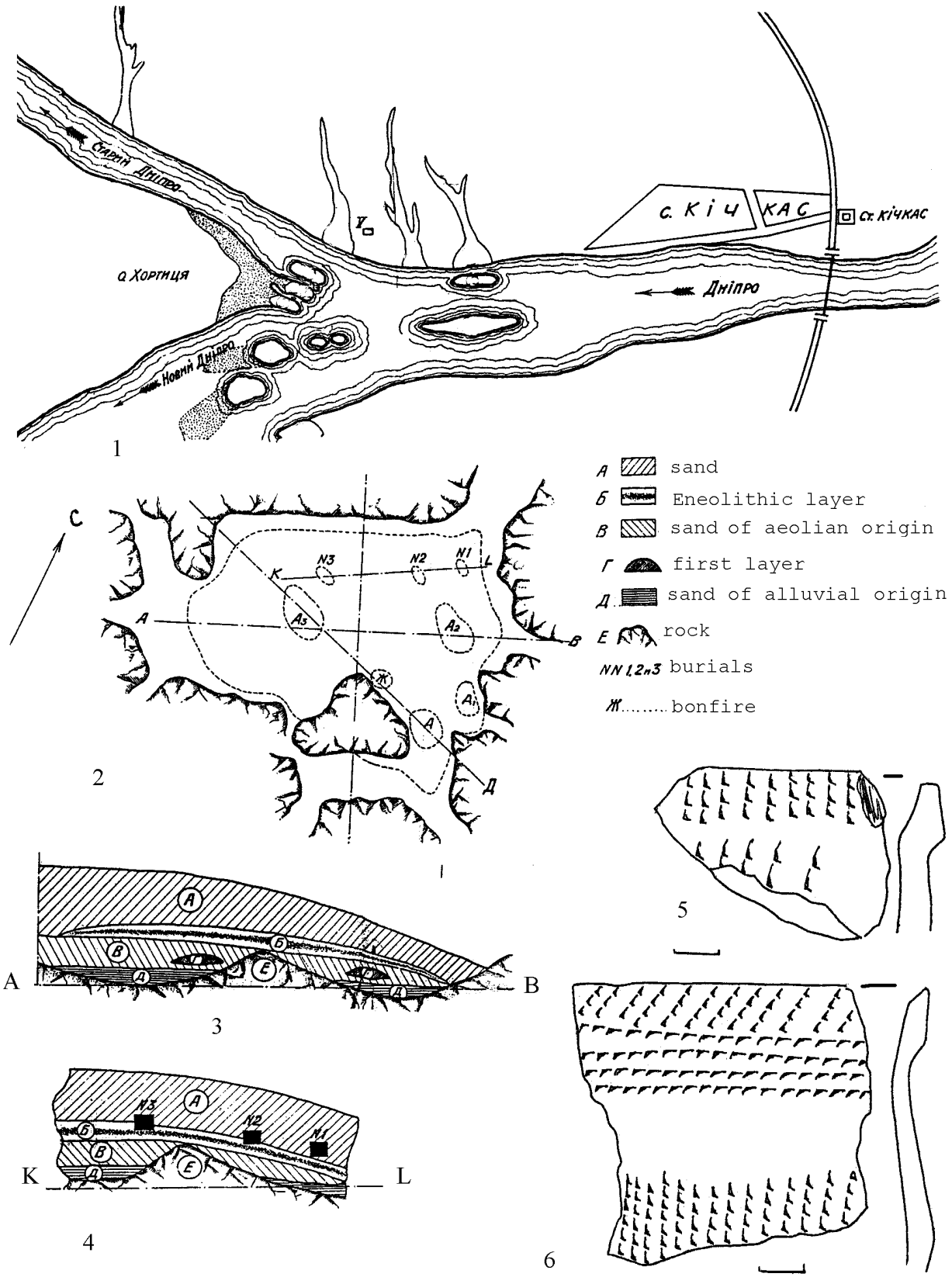


Fig. 4. Settlement on Sredniy Stog Island

1 - schema of Sredniy Stog Island location; 2 - plan of settlement; 3,4 - sections through AB and KL lines; 5,6 - pottery of the second period of the Azov-Dnieper culture from the first layer.

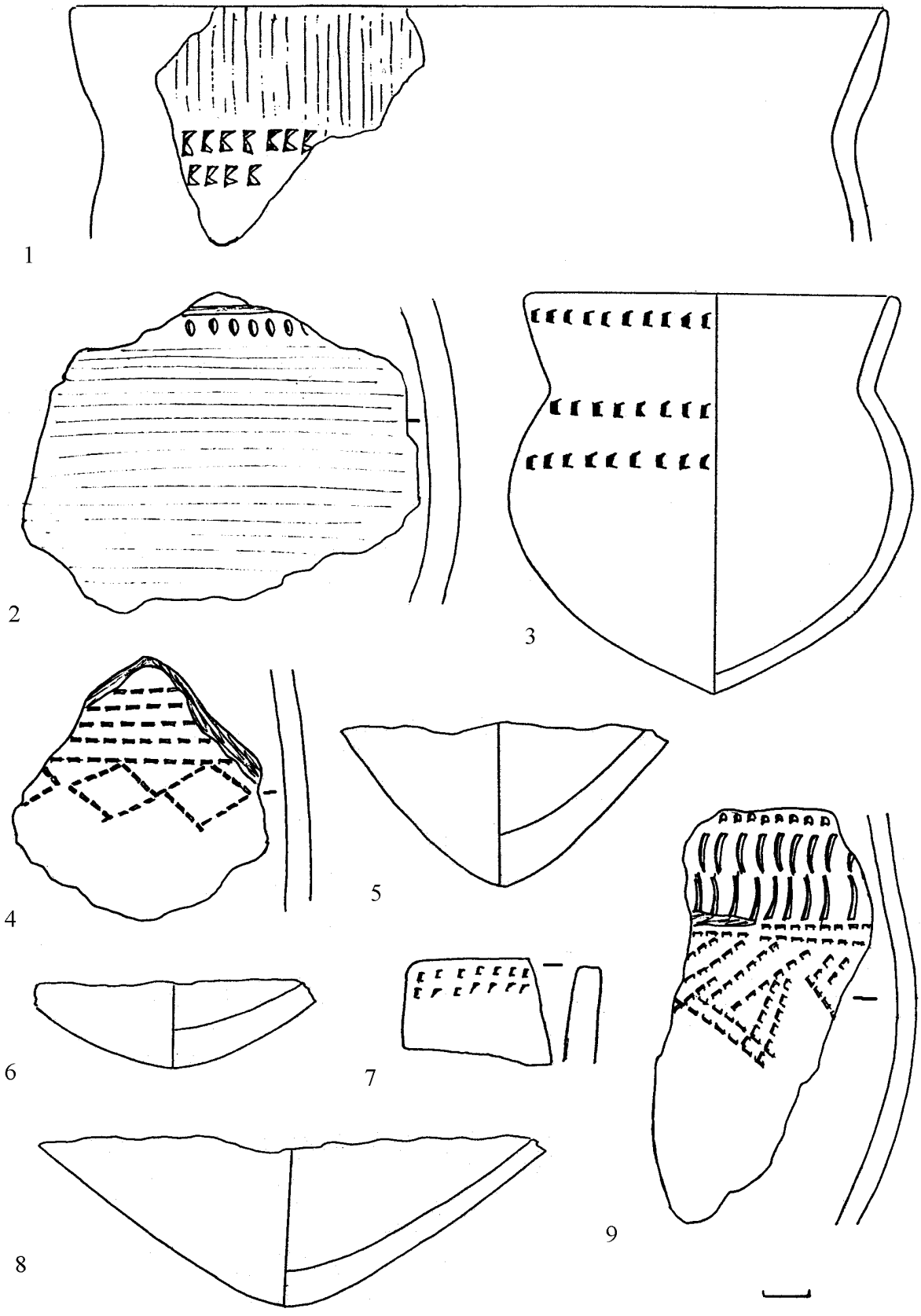


Fig. 5. Pottery of the second layer from Sredniy Stog.

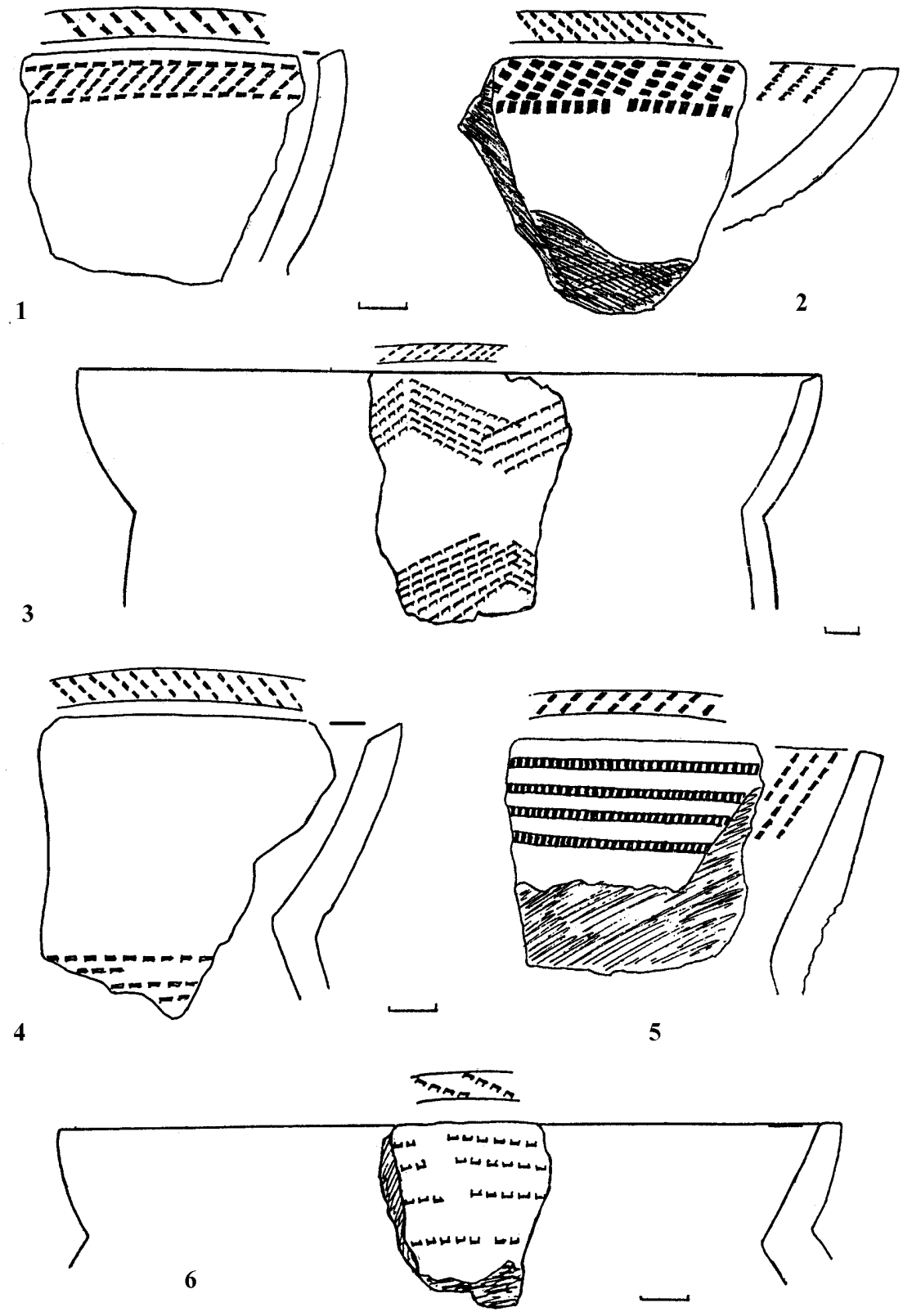


Fig. 6. Pottery of the second layer from Sredniy Stog.

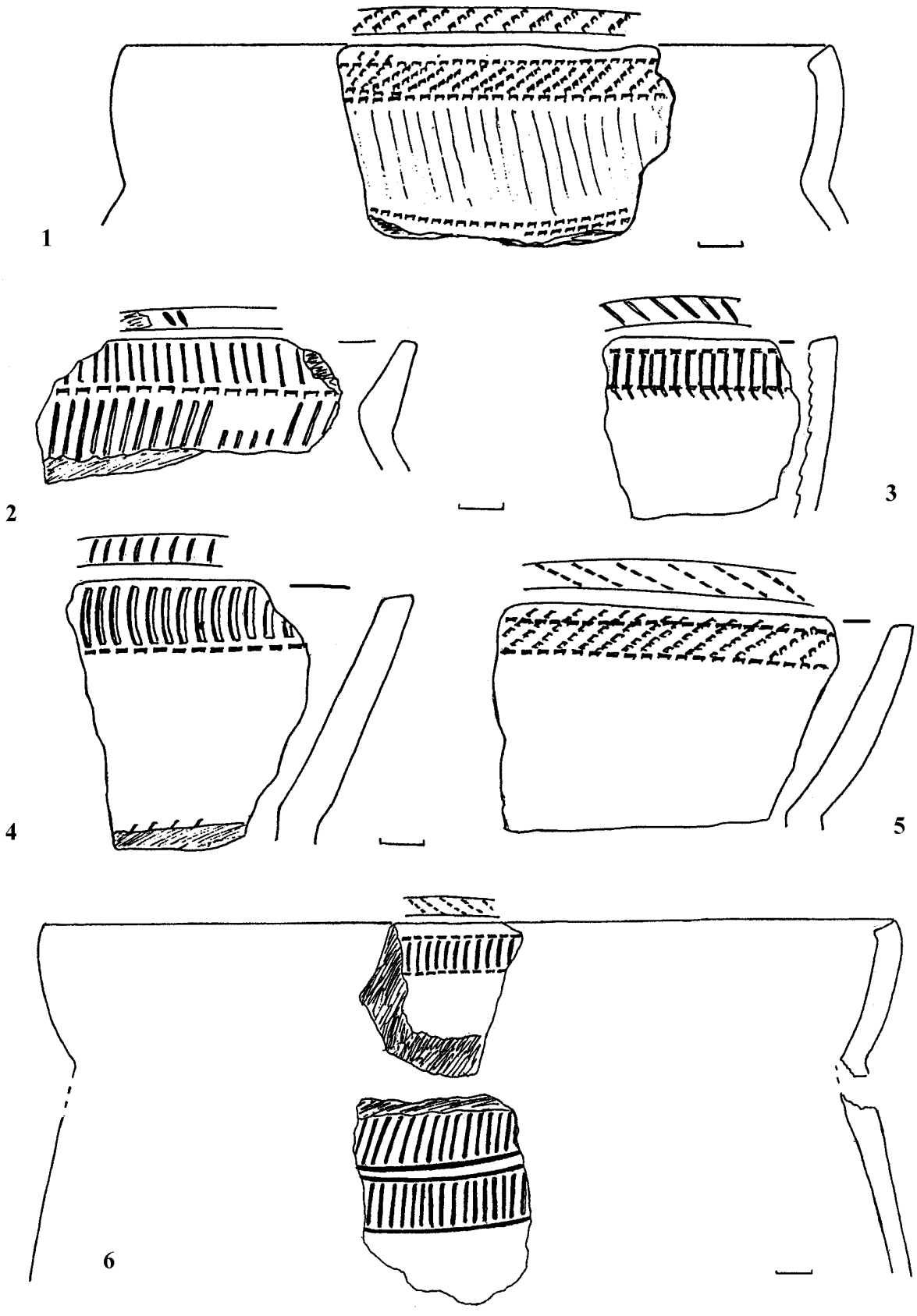


Fig. 7. Pottery of the second layer from Sredniy Stog.

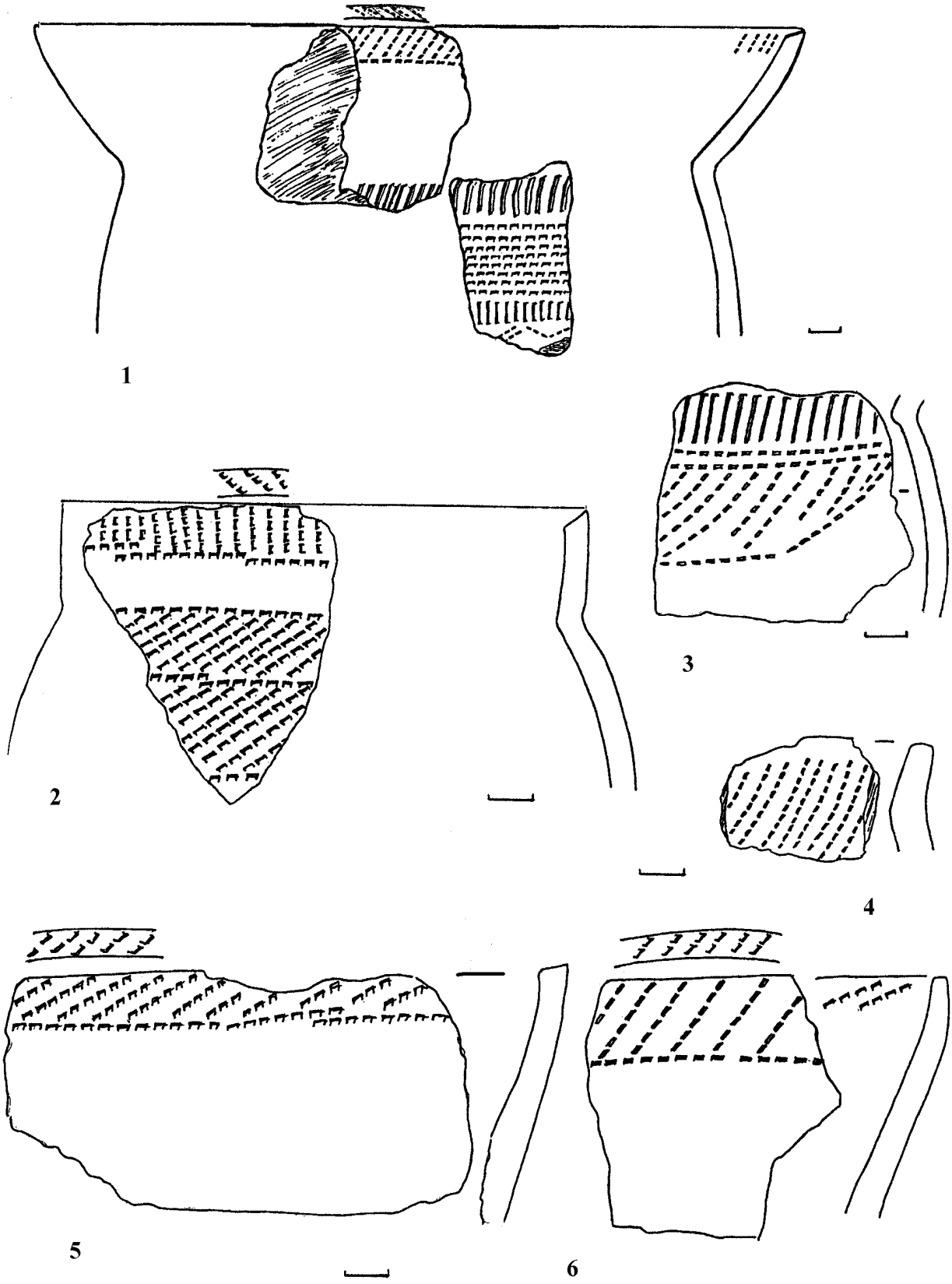


Fig. 8. Pottery of the second layer from Sredniy Stog.

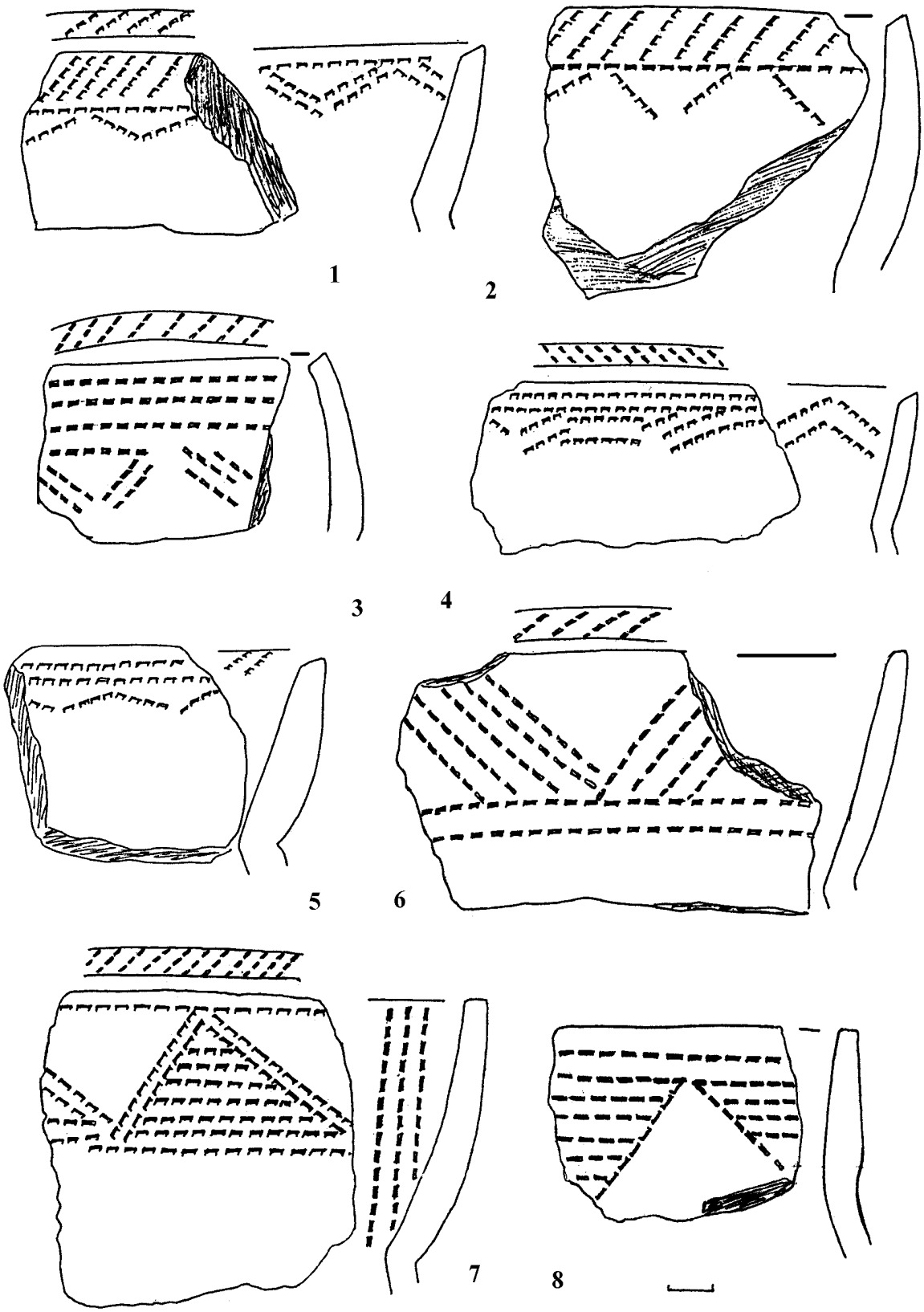


Fig. 9. Pottery of the second layer from Srendiy Stog.

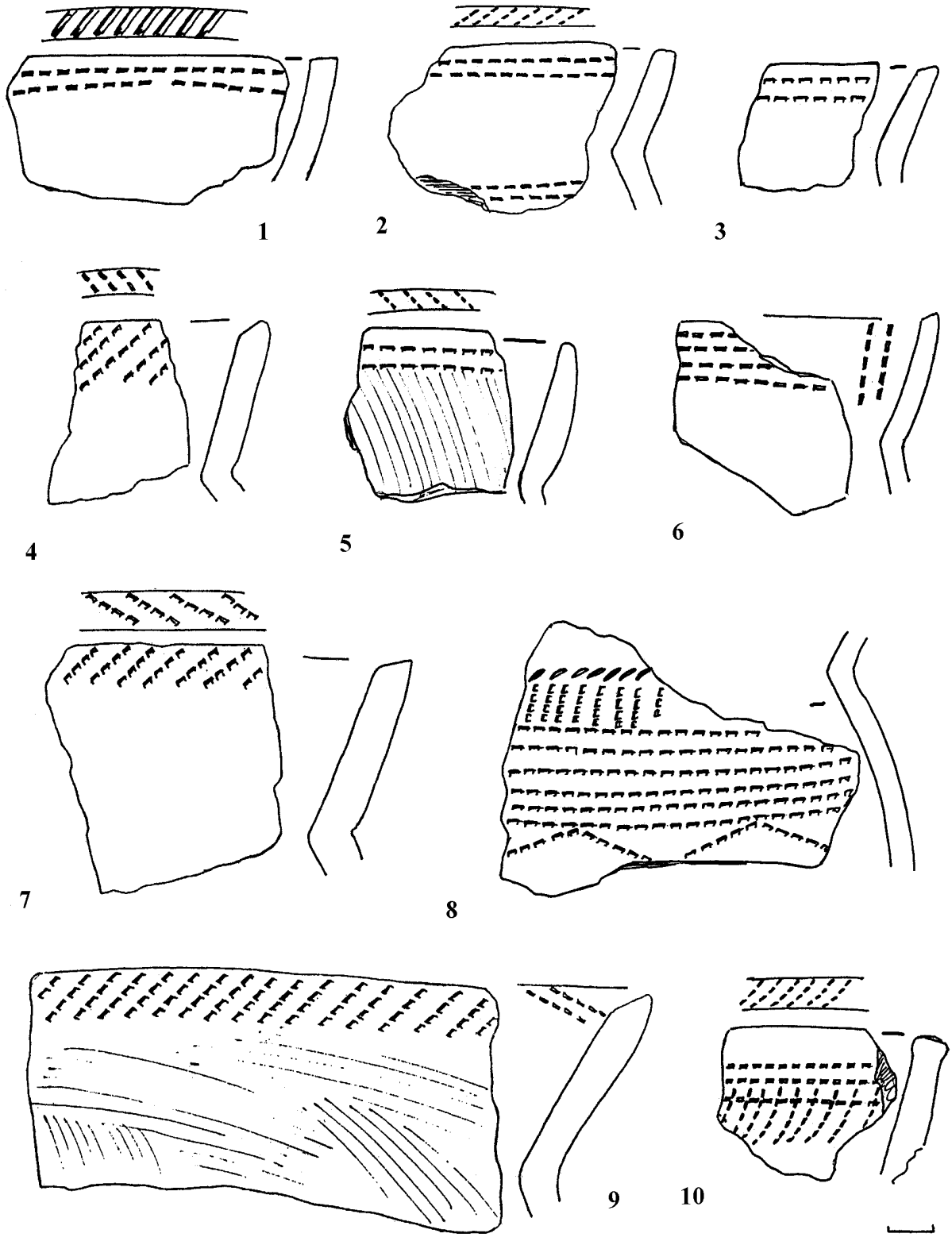


Fig. 10. Pottery of the second layer from Sredniy Stog.

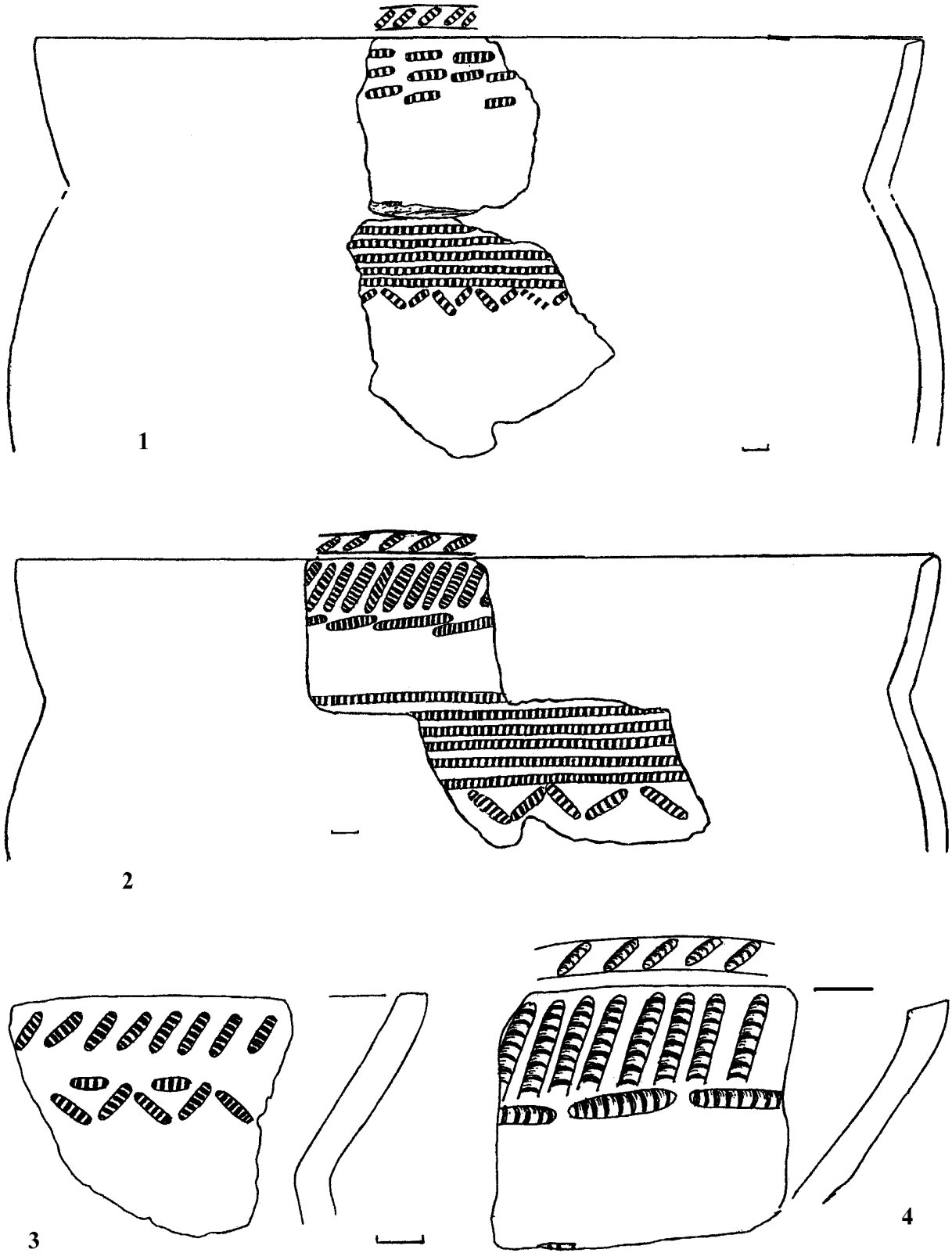


Fig. 11. Pottery of the second layer from Sredniy Stog.

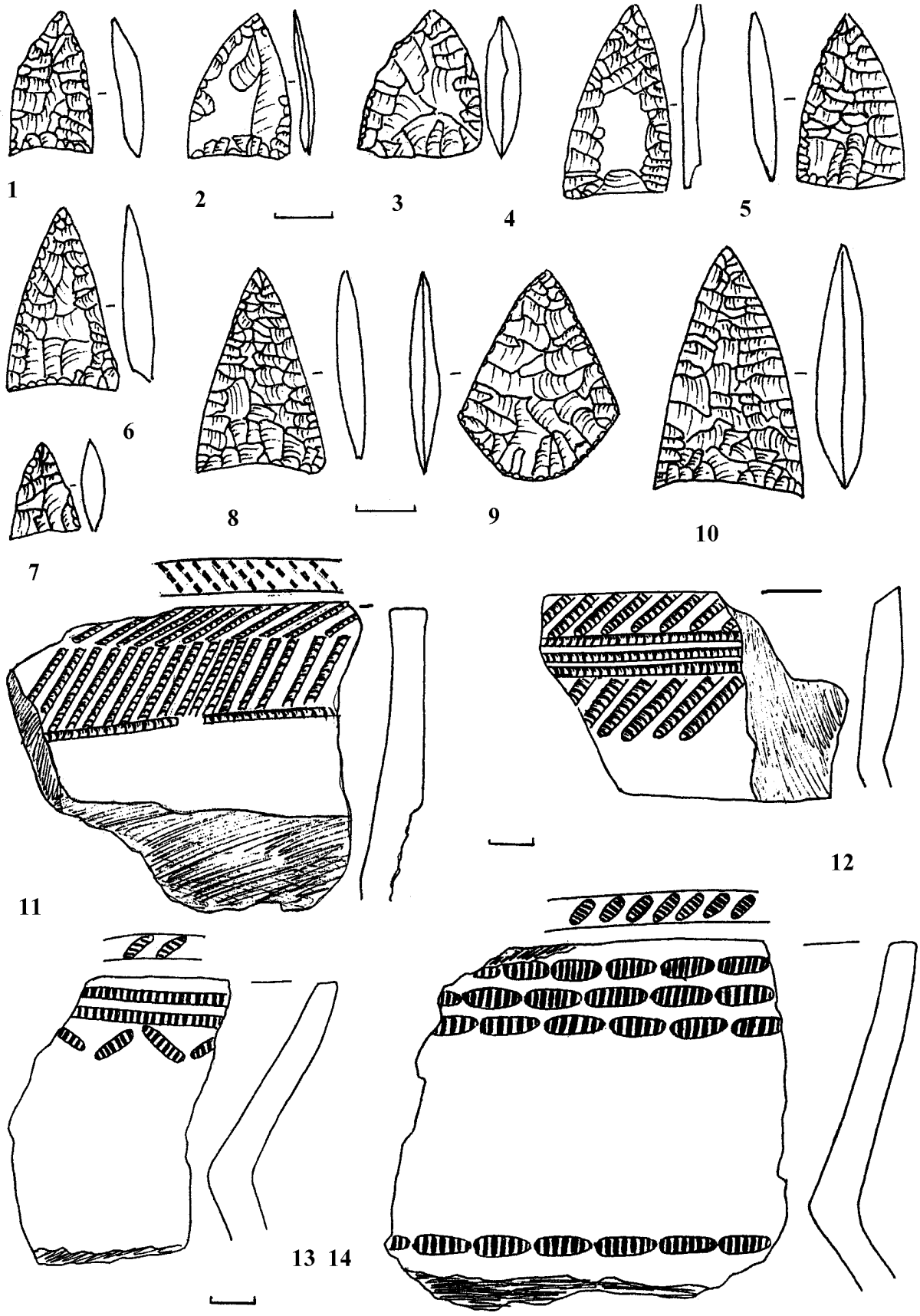


Fig. 12. Materials of the second layer from Sredniy Stog.

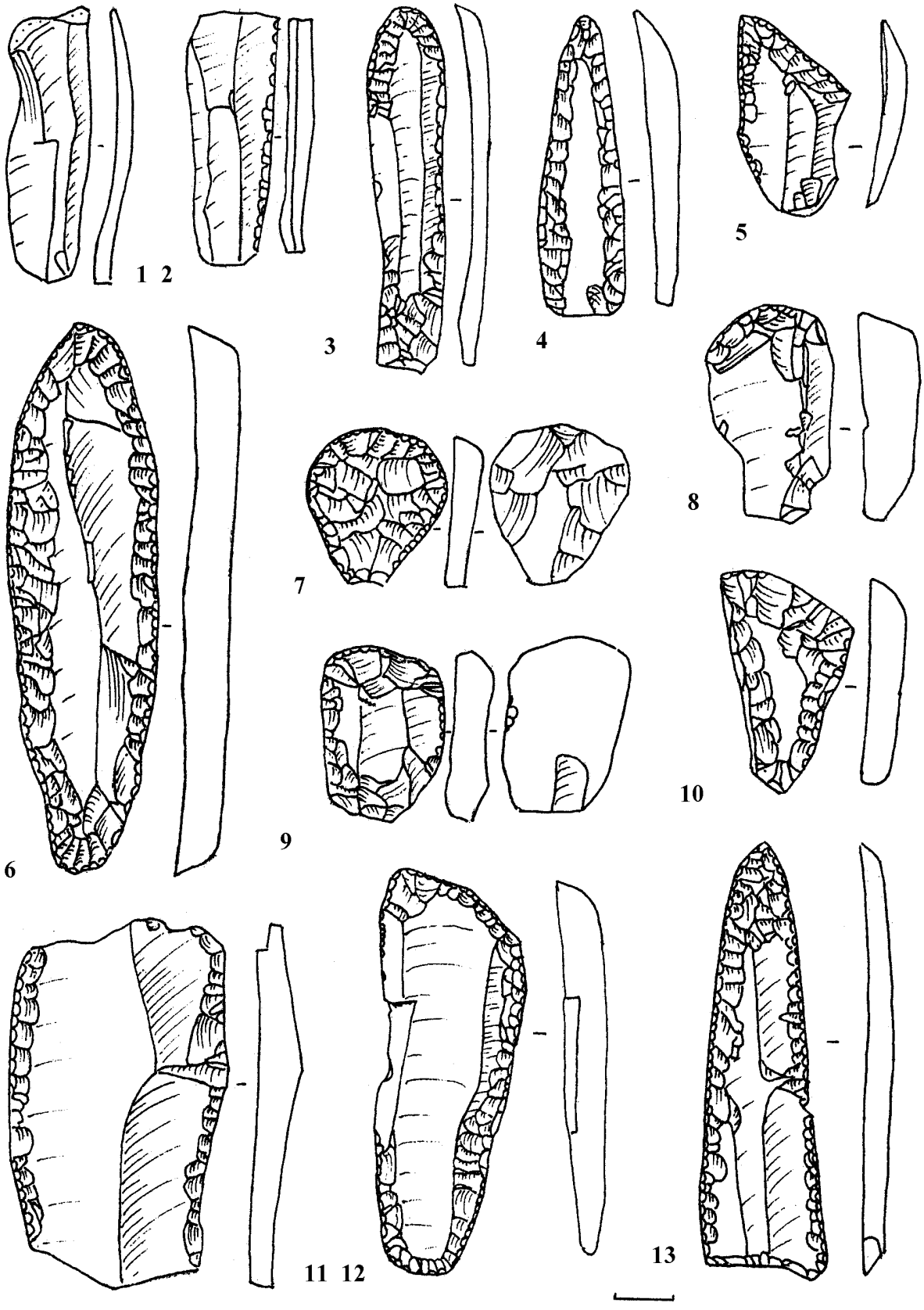


Fig. 13. Materials of the second layer from Sredniy Stog.

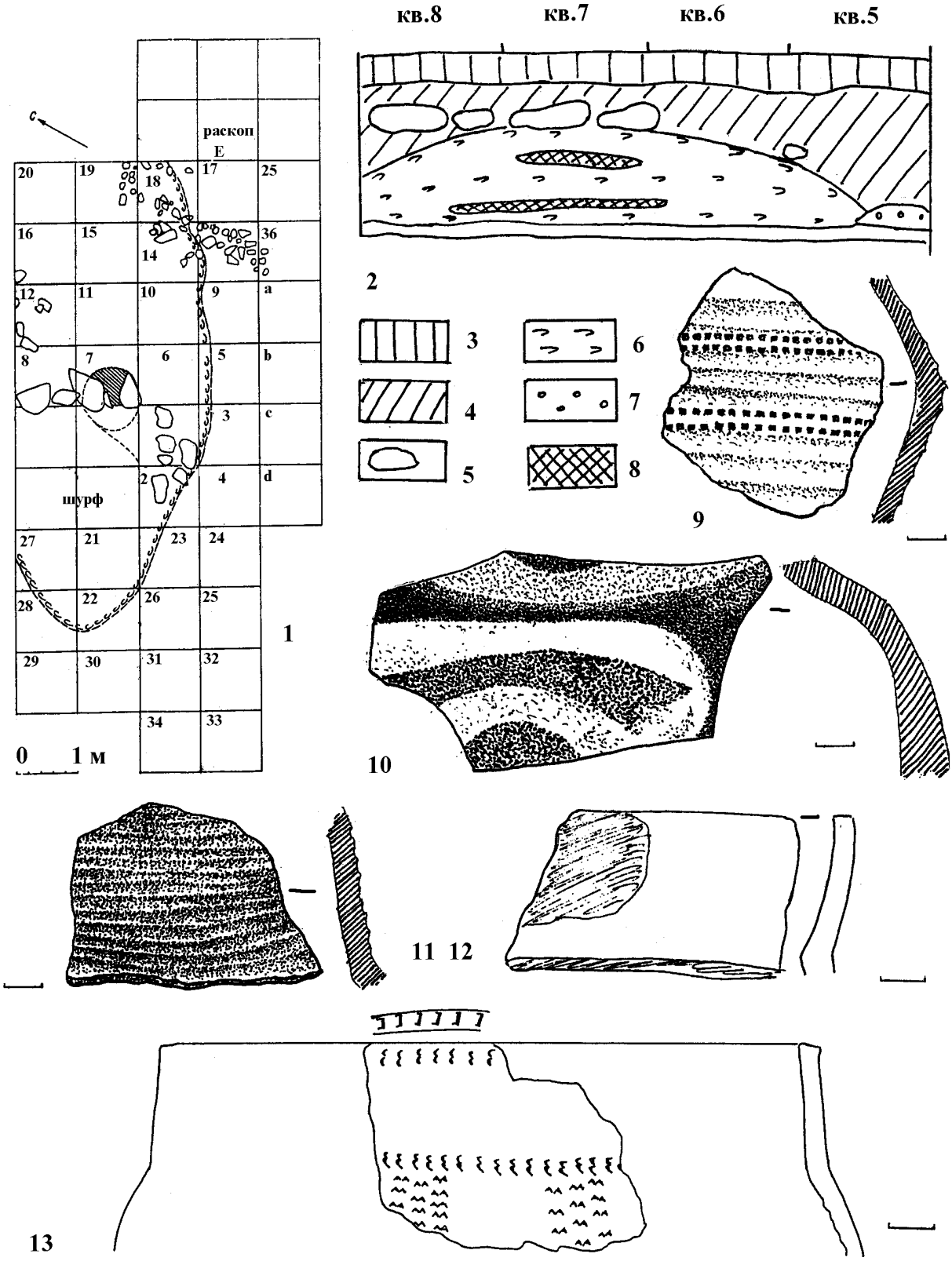


Fig 14. Settlement on Strilcha Skelja Island

1 - plan of Early Bronze and Eneolithic layers excavated in 1946; 2 - section of north-east wall through 5-8 squares; 3 - present soil; 4 - dark-brown sand; 5 - stones from the Yamnaja culture layer; 6 - Unio shells; 7 - Poludinae shells; 8 - bonfire; 9-11 - pottery of the Tripolya culture; 12,13 - pottery of the third layer from Strilcha Skelja.

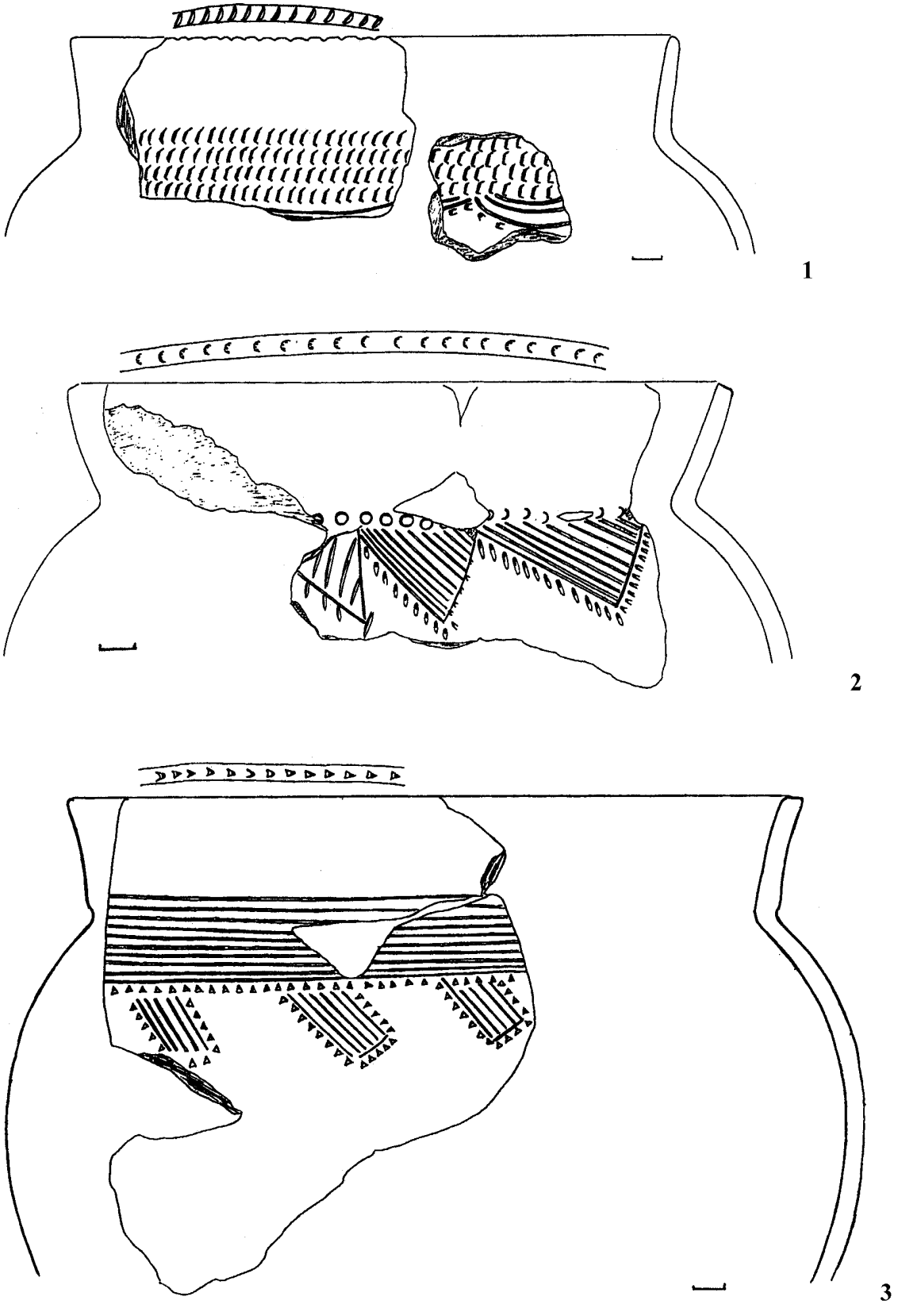


Fig. 15. Pottery of the third layer from Strilcha Skelja.

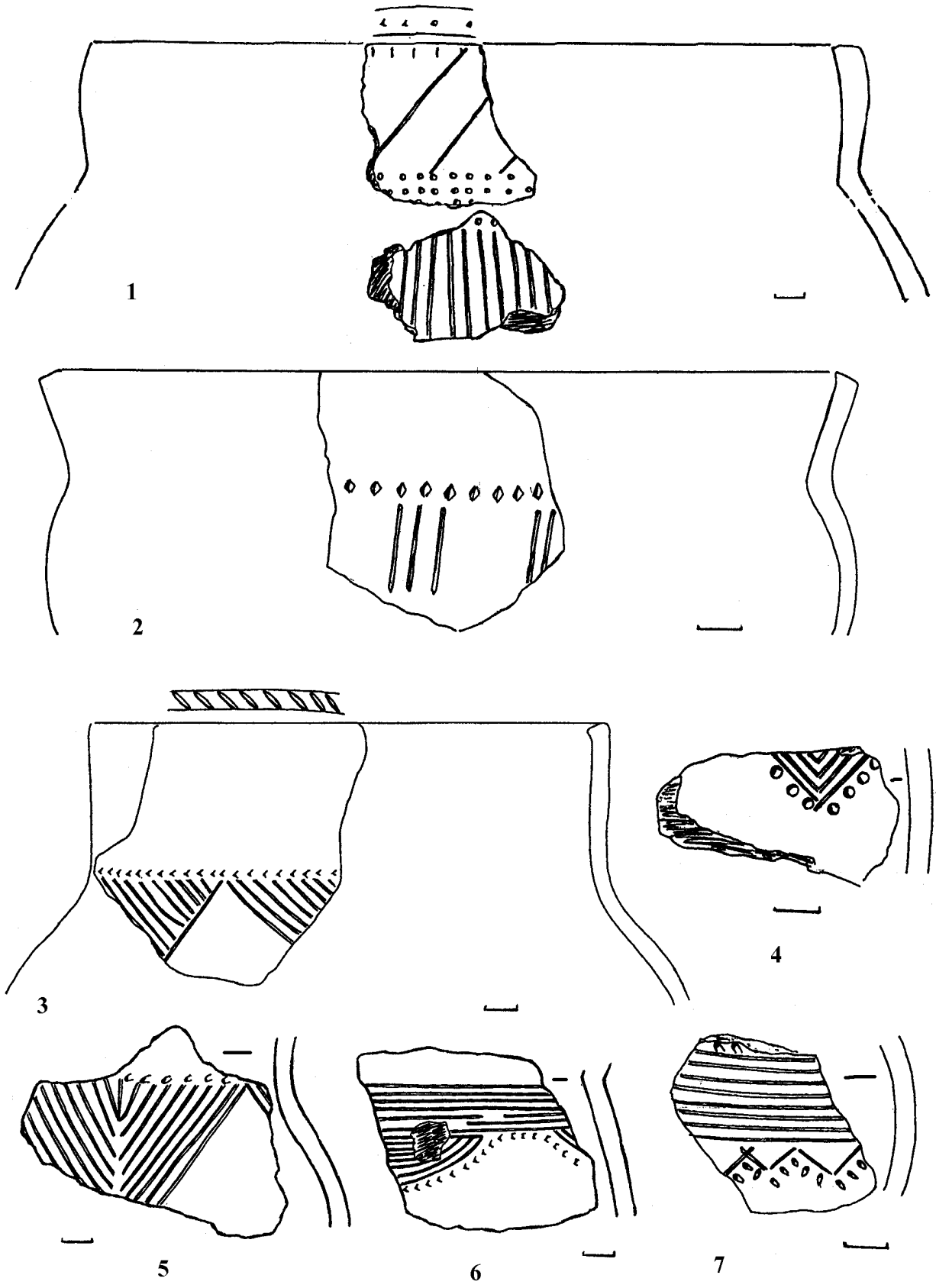


Fig. 16. Pottery of the third layer from Strilcha Skelja.

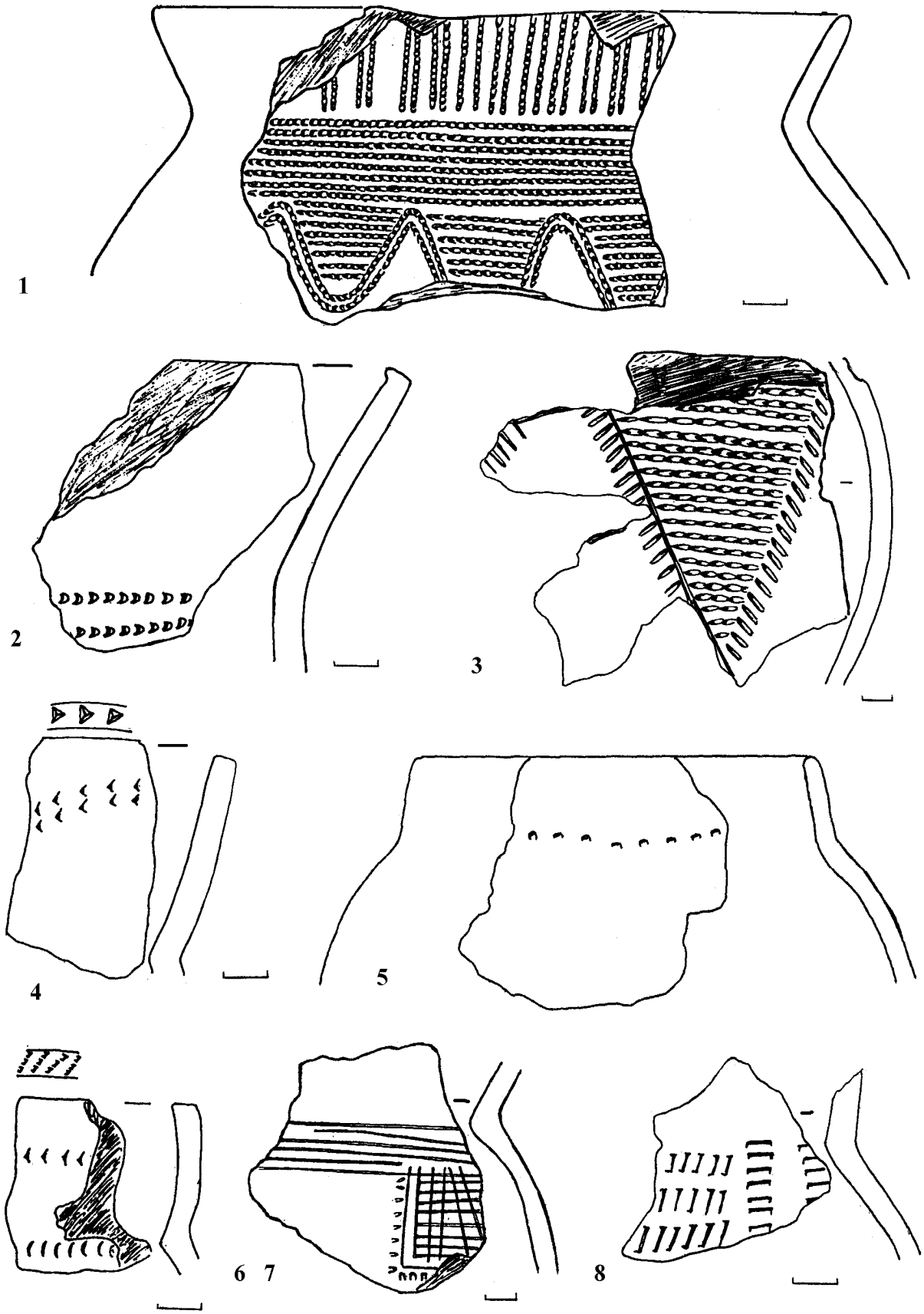


Fig. 17. Pottery of the third layer from Strilcha Skelja.

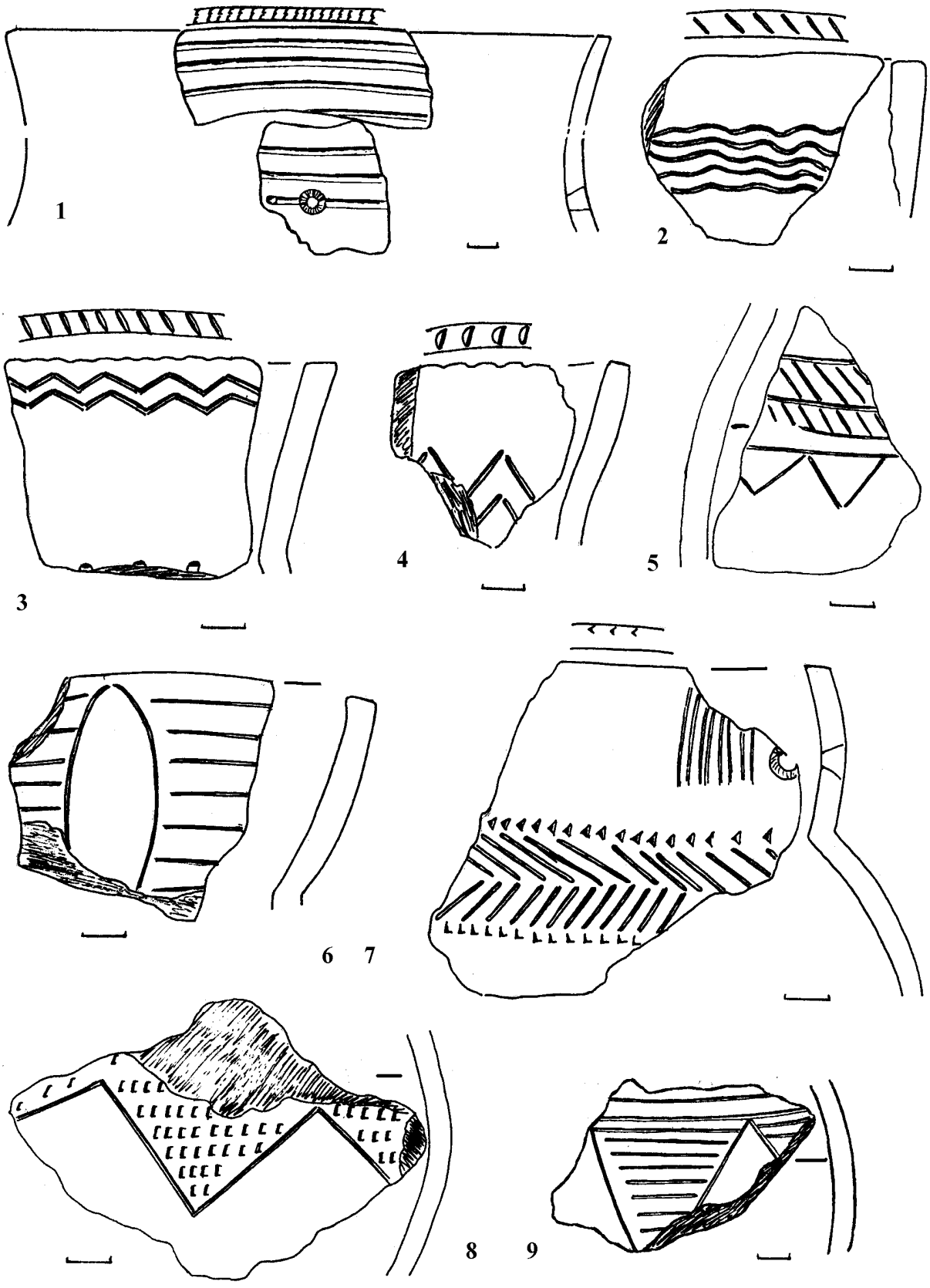


Fig. 18. Pottery of the third layer from Strilcha Skelja.

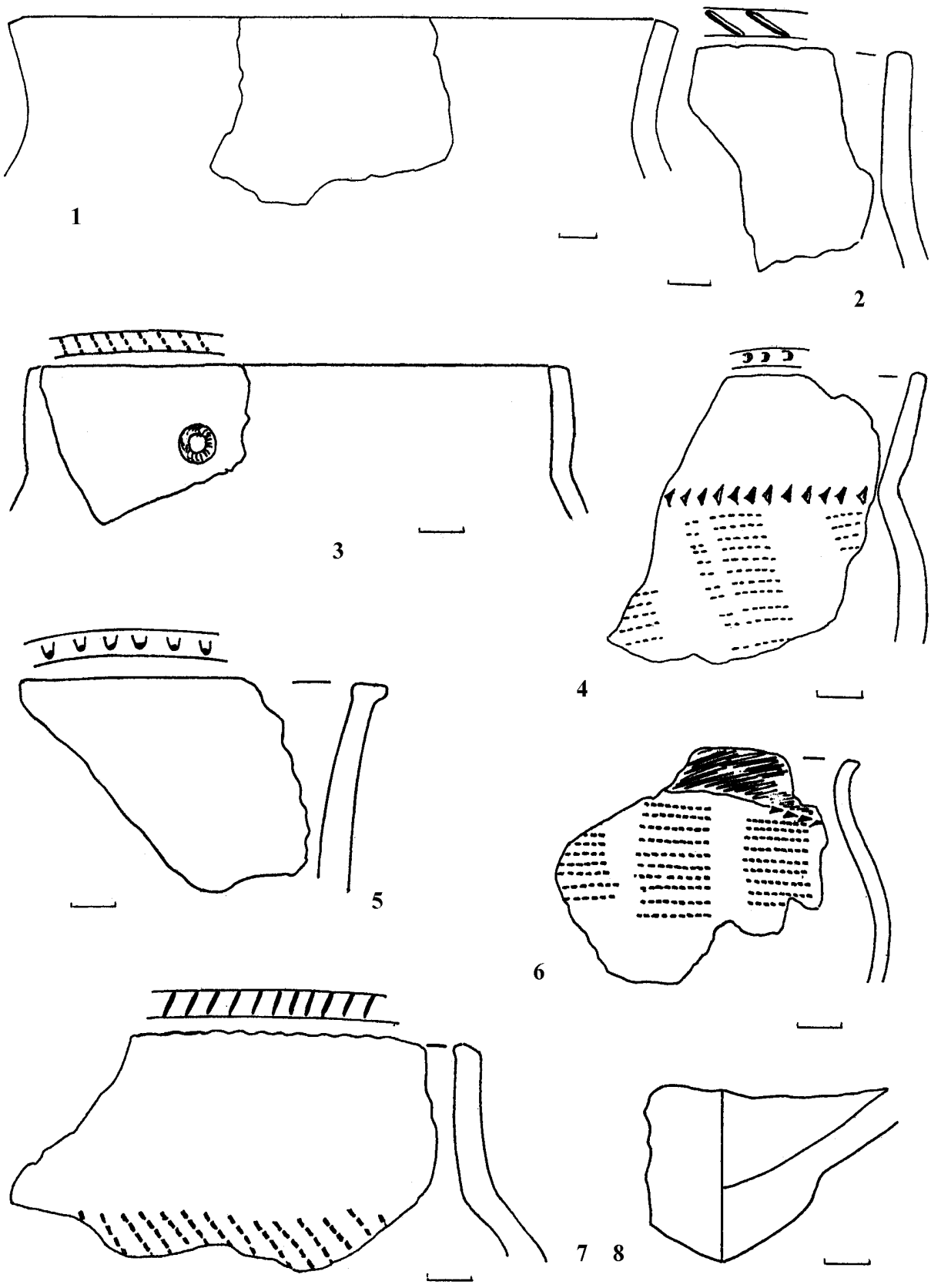


Fig. 19. Pottery of the third layer from Strilcha Skelja.

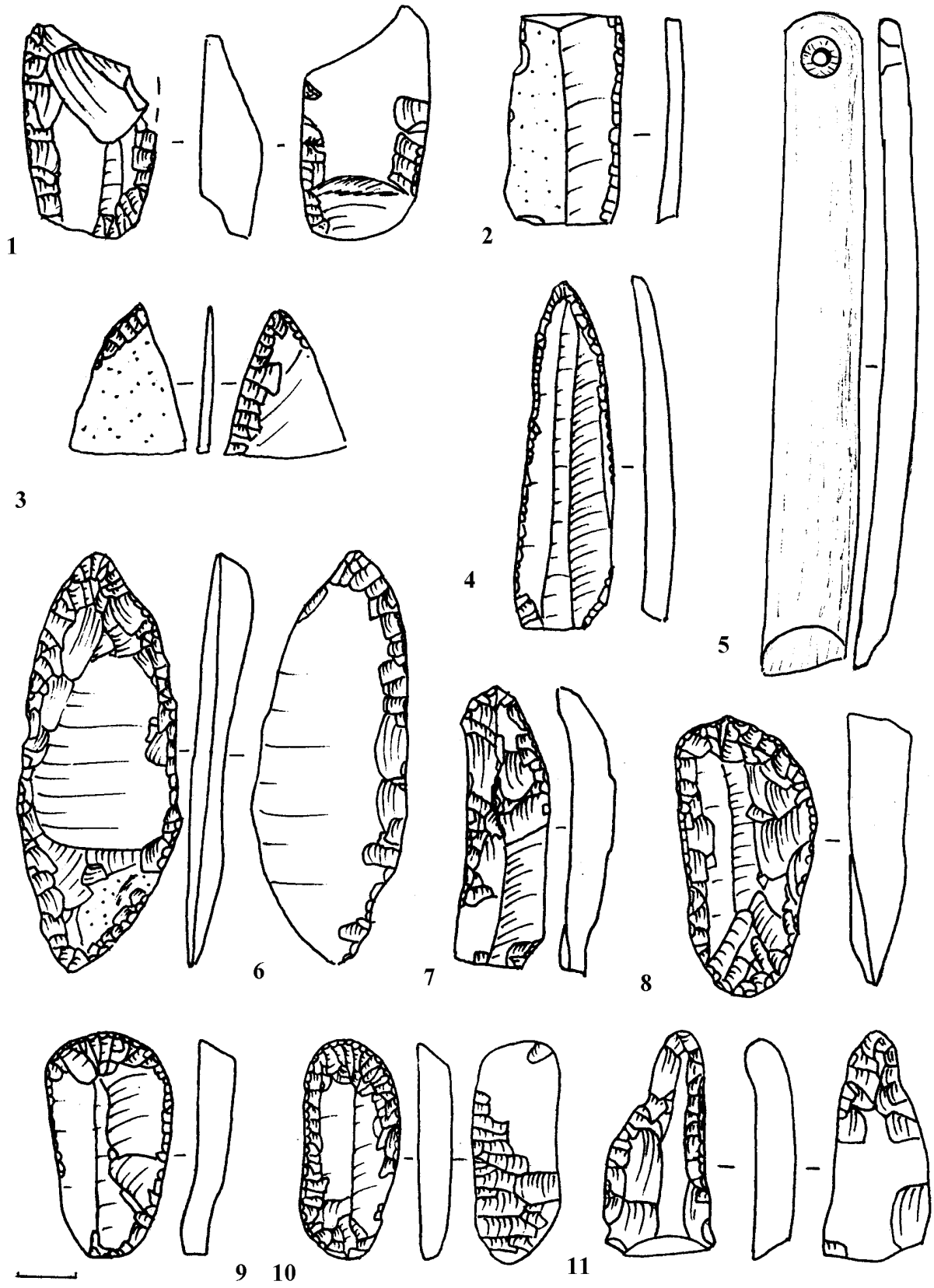


Fig. 20. Materials from Strilcha Skelja

1,3-6 - third layer; 2,8-11 - fourth layer; 7 - mixed third and fourth layers.

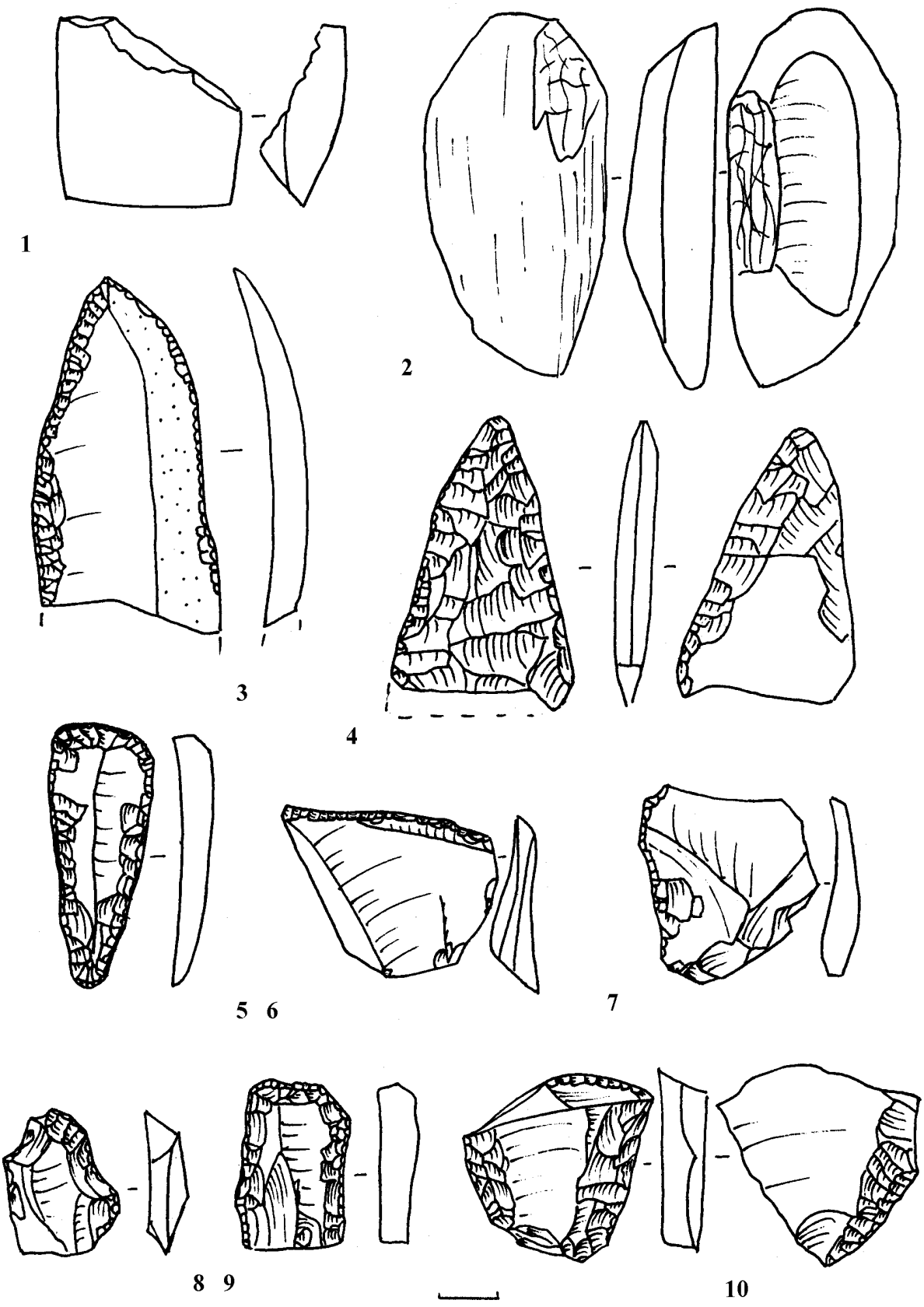


Fig. 21. Strilcha Skelja: materials of mixed the second and the third layers (1 - stone; 2 - bone).

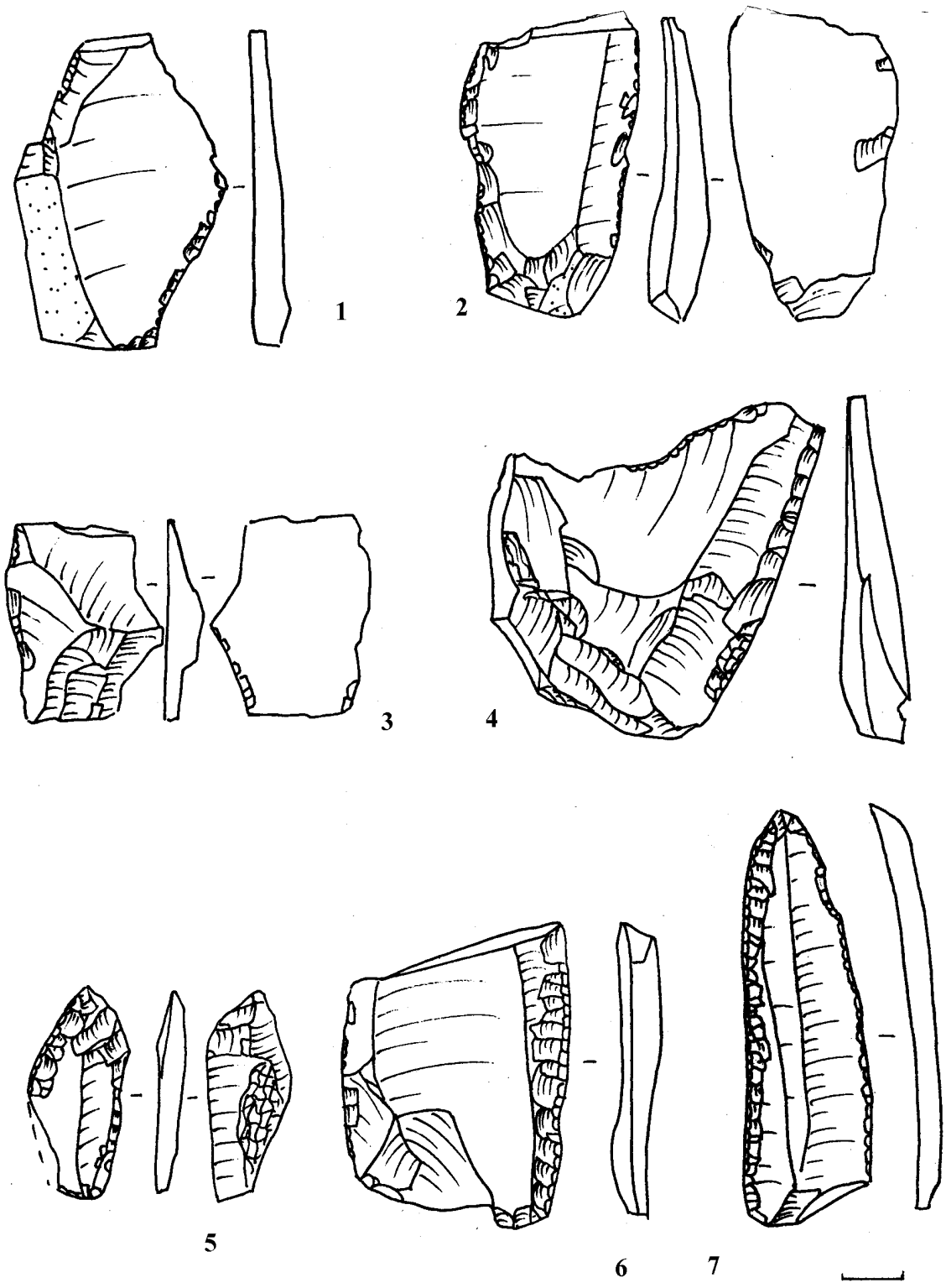


Fig. 22. Strilcha Skelja

1-6 - materials of mixed the second and the third layers;
7- tool of mixed the second and the fourth layers.

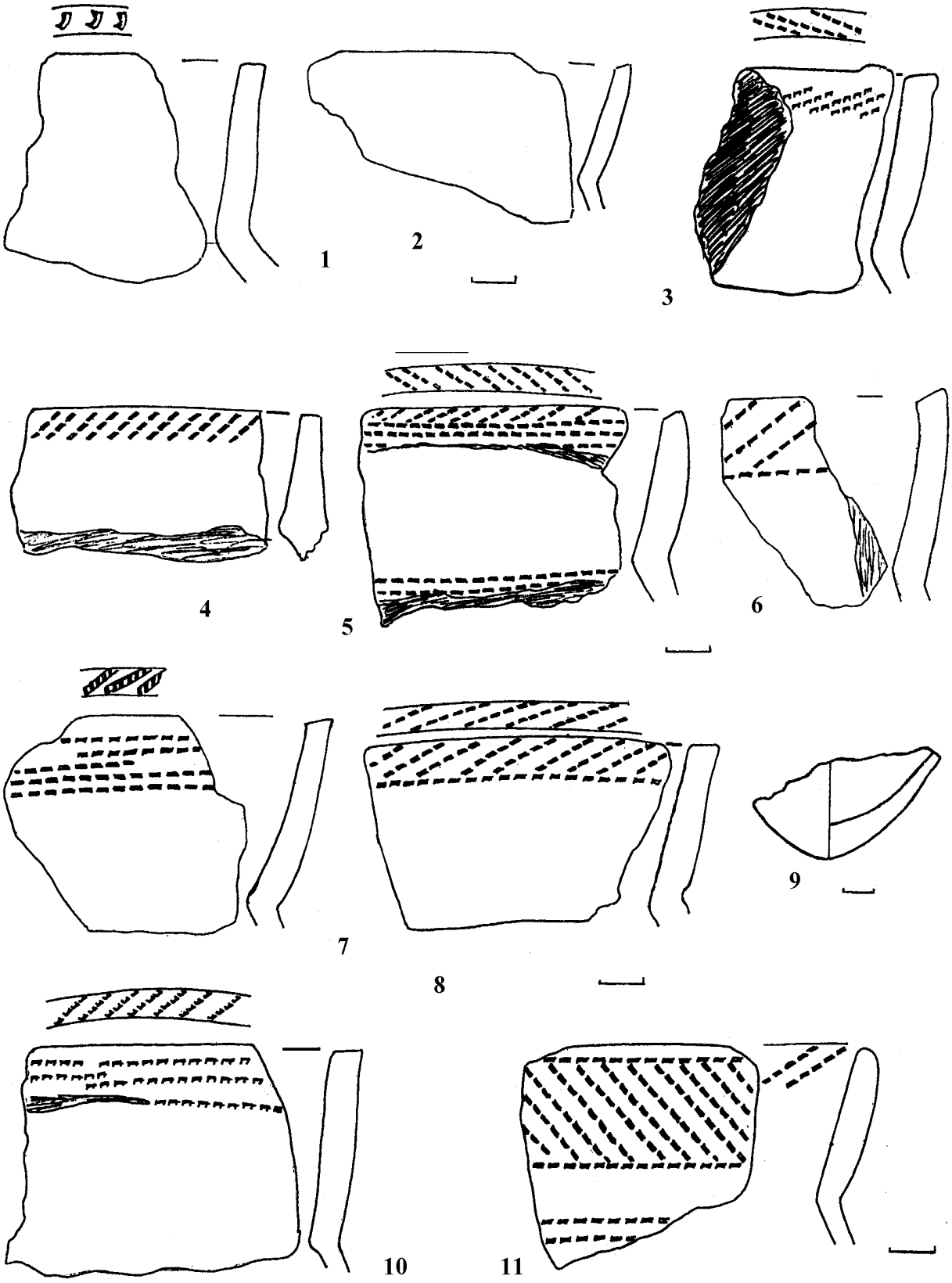


Fig. 23. Pottery of the fourth layer from Strilcha Skelja.

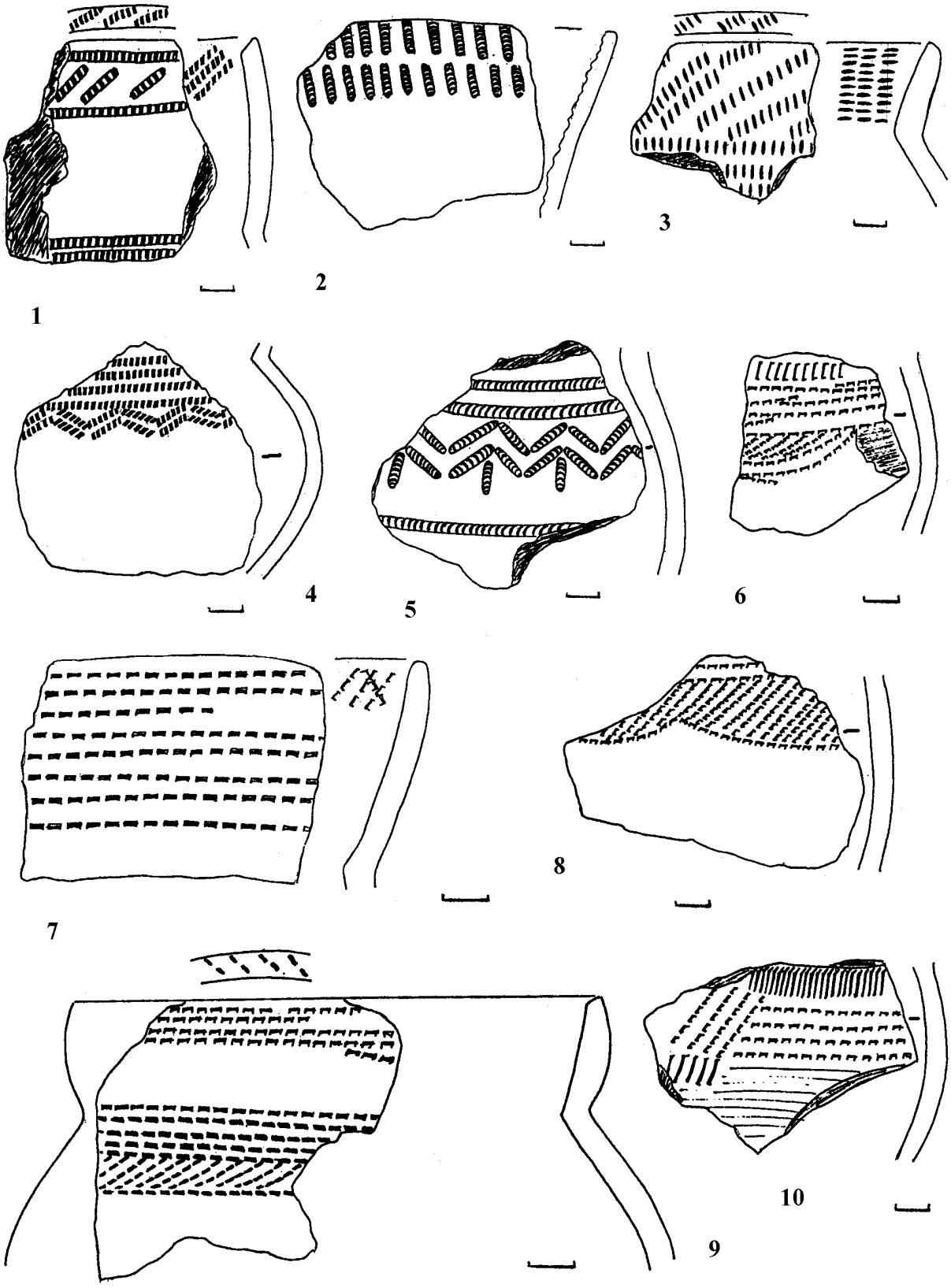


Fig. 24. Pottery of the fourth layer from Strilcha Skelja.

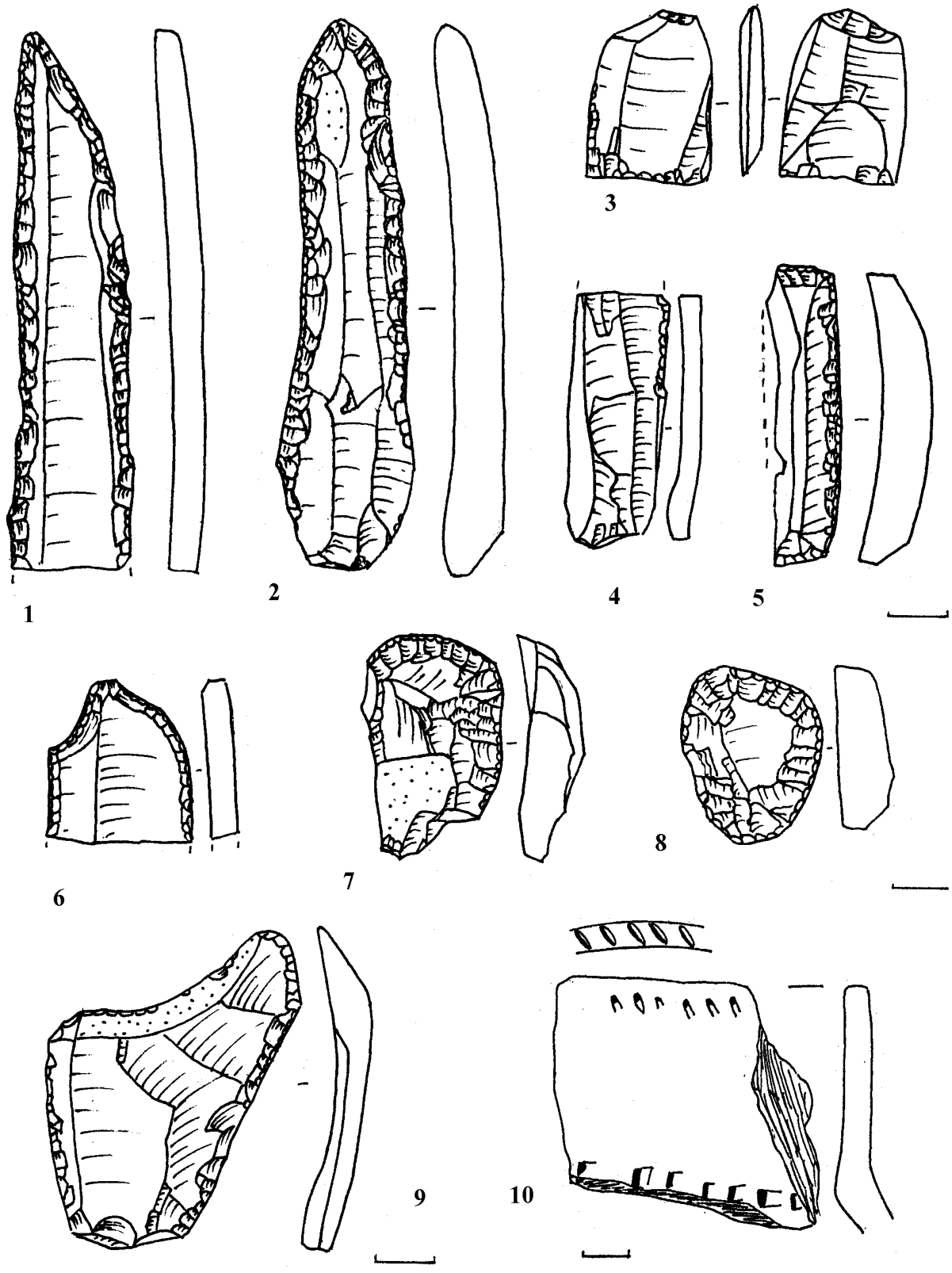


Fig. 25. Strilcha Skelja

1-9 - materials of mixed the third and the fourth layers;

10 - ceramic of the fourth layer.

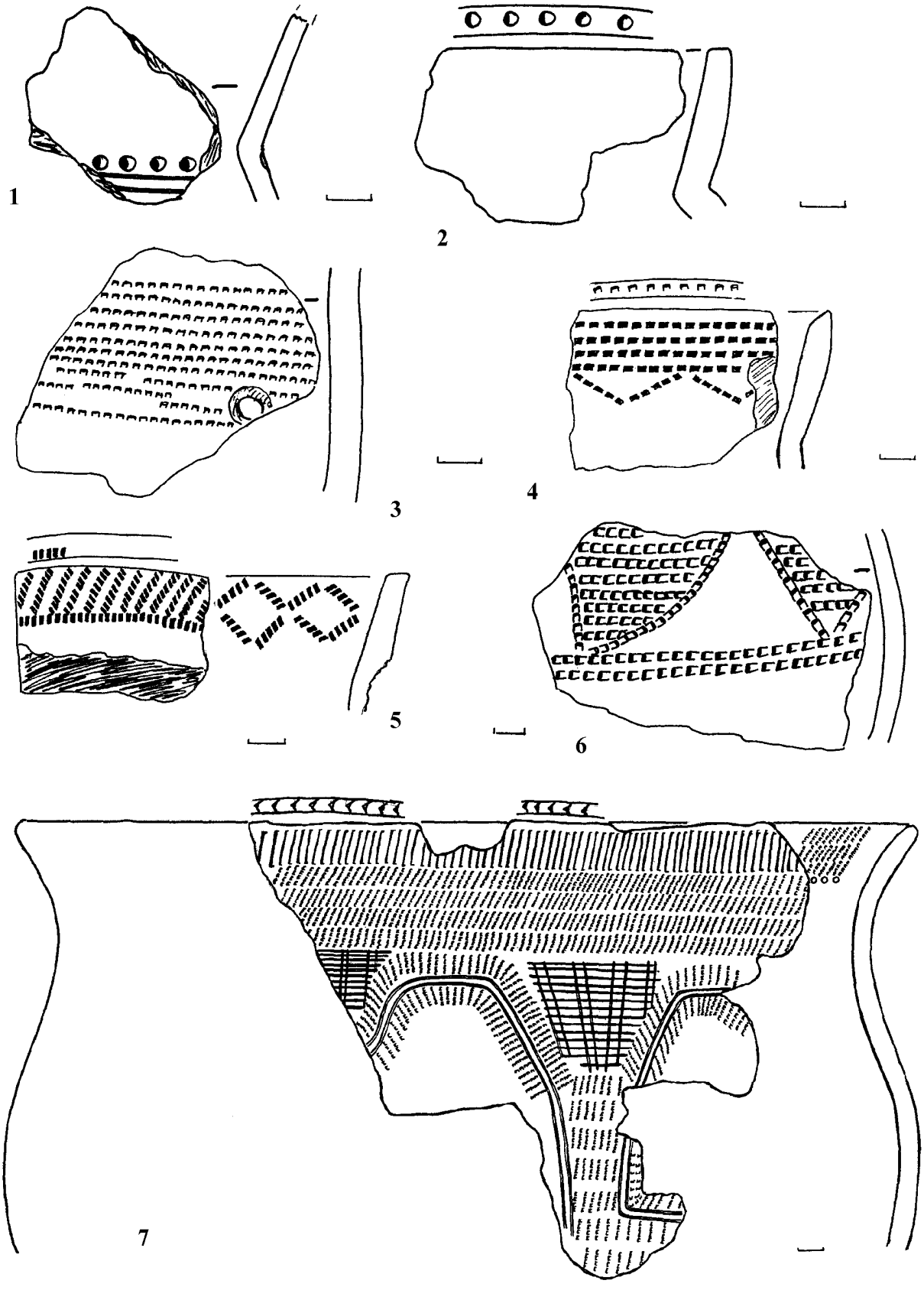


Fig. 26. Pottery of the Sredniy Stog culture

1,2 - Vinogradny Island; 3,4 - Zolotaja Balka; 5-7 - Kizlevy Island.

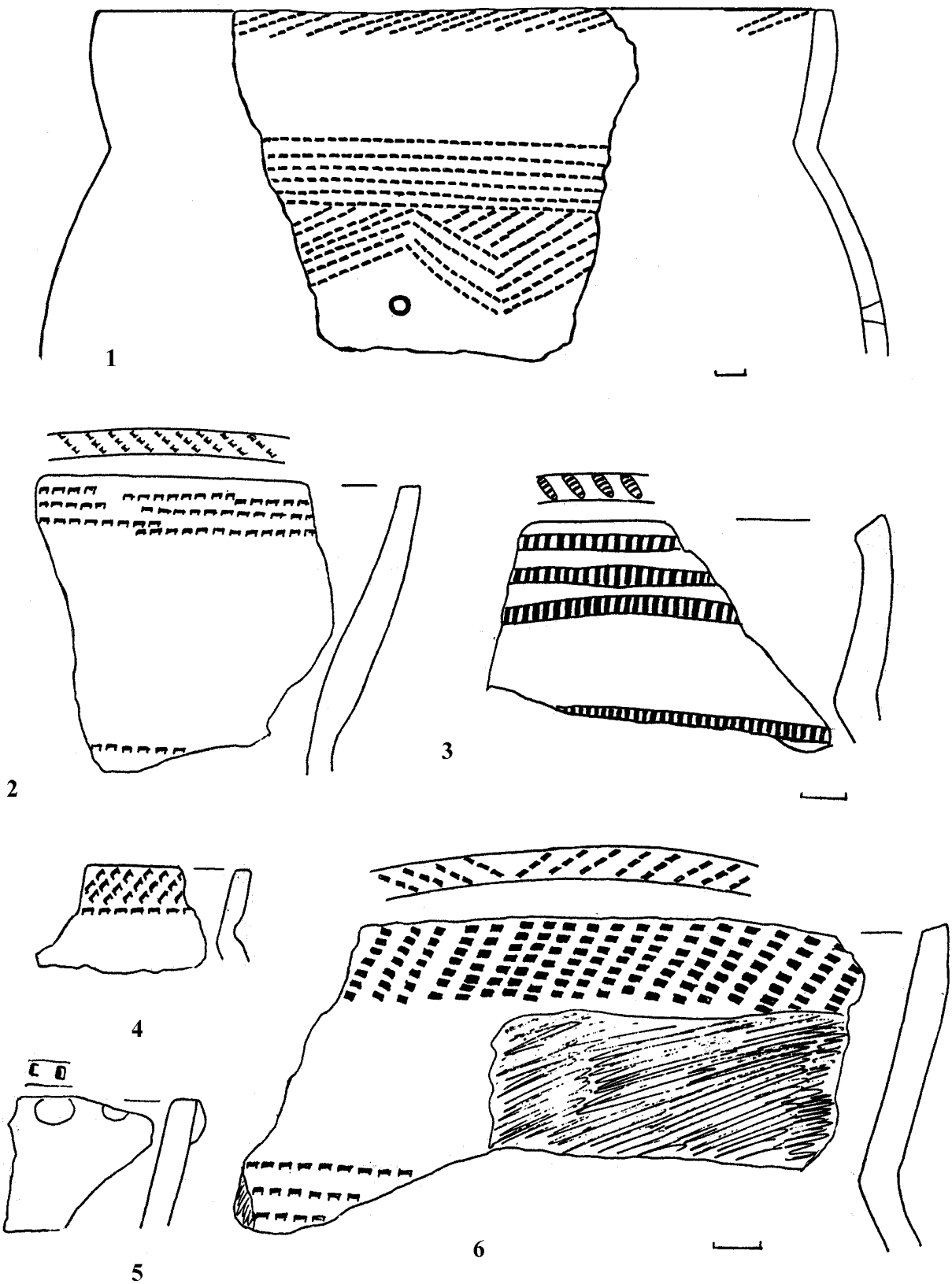


Fig. 27. Pottery from Kodachok Island.

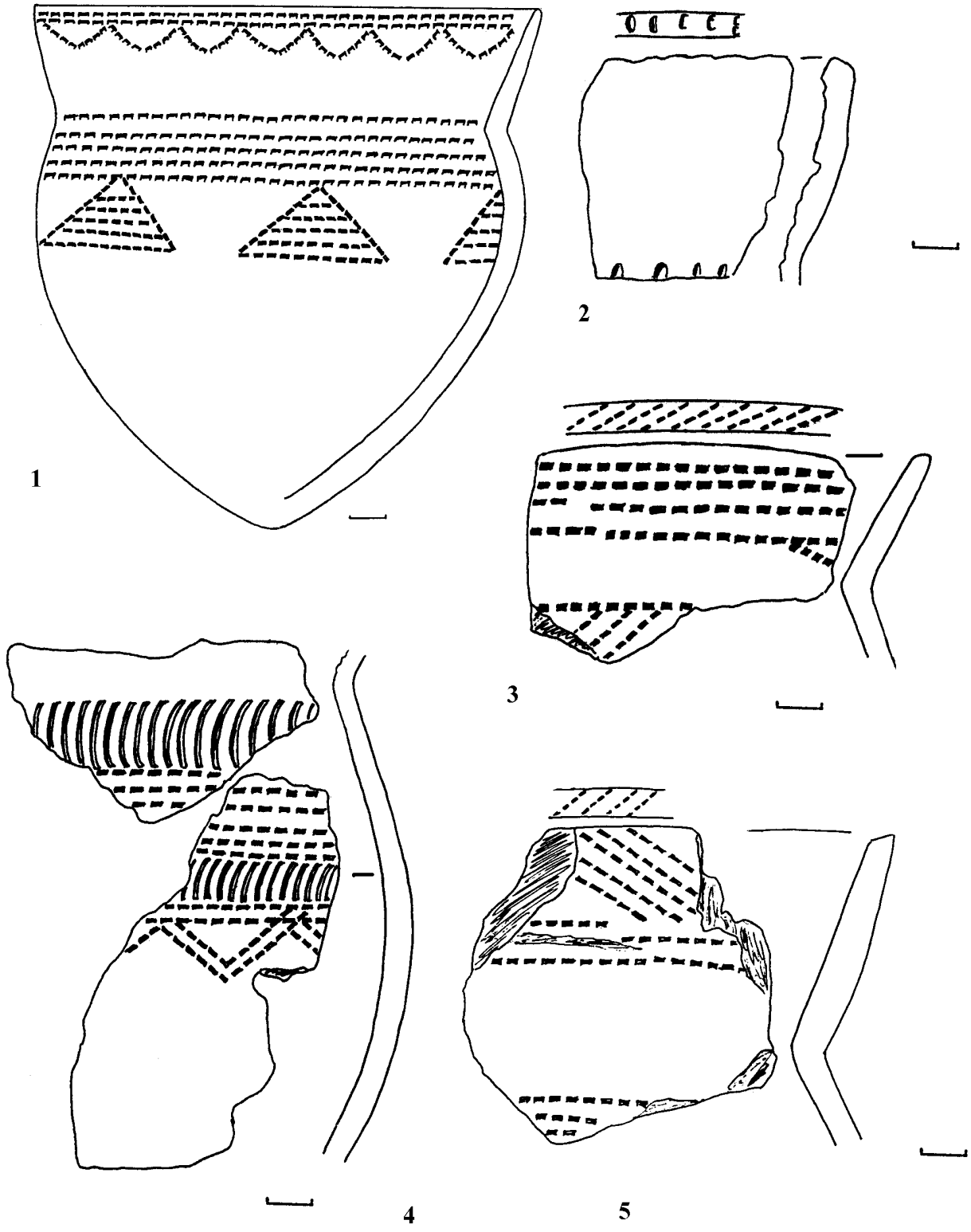


Fig. 28. Pottery of the Sredniy Stog culture

1 - Khortitsa Island; 2-4 - Kodachok Island; 5 - Sobachki.

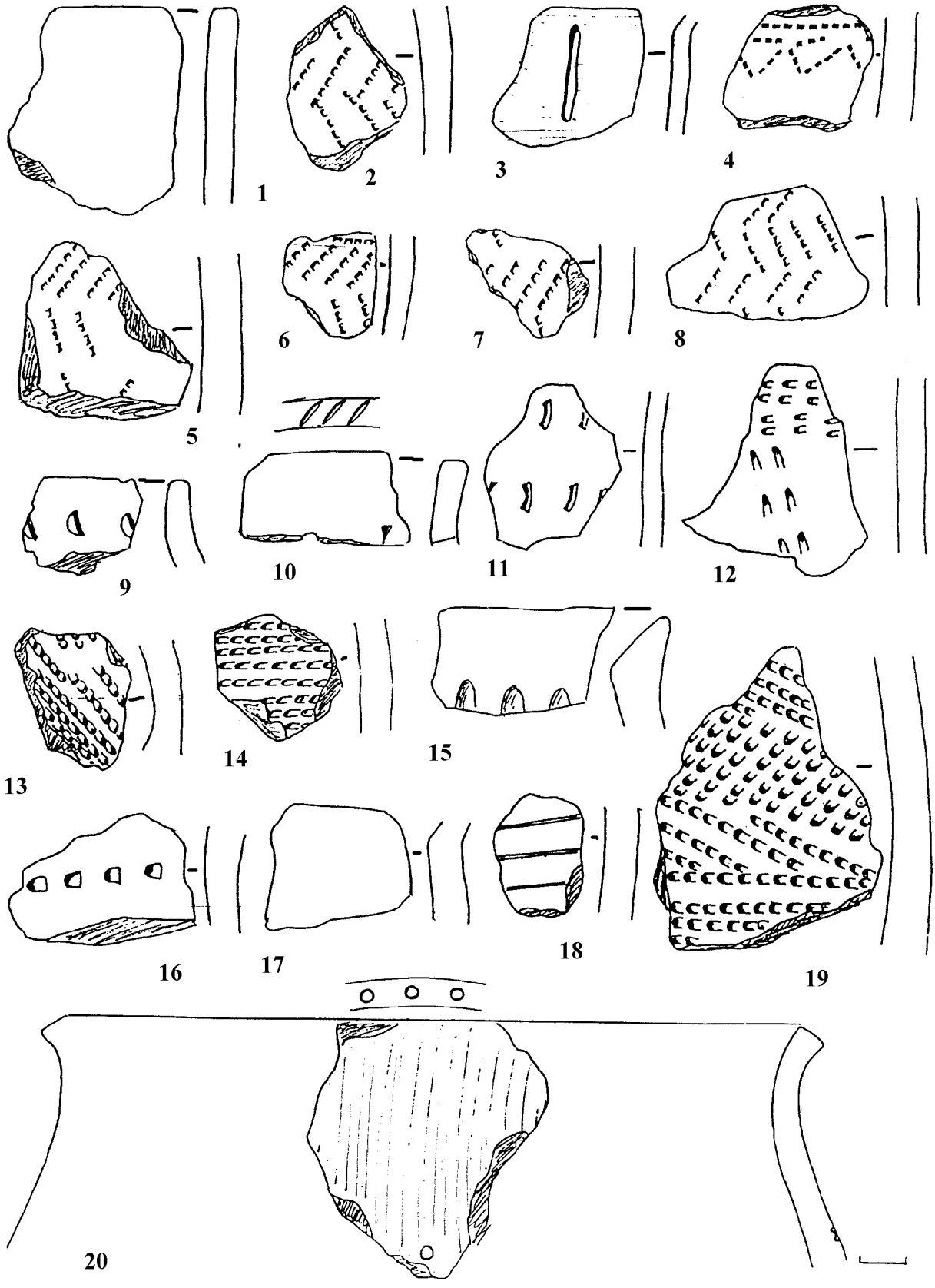


Fig. 29. Eneolithic pottery from Kamennaja Mogila 1.

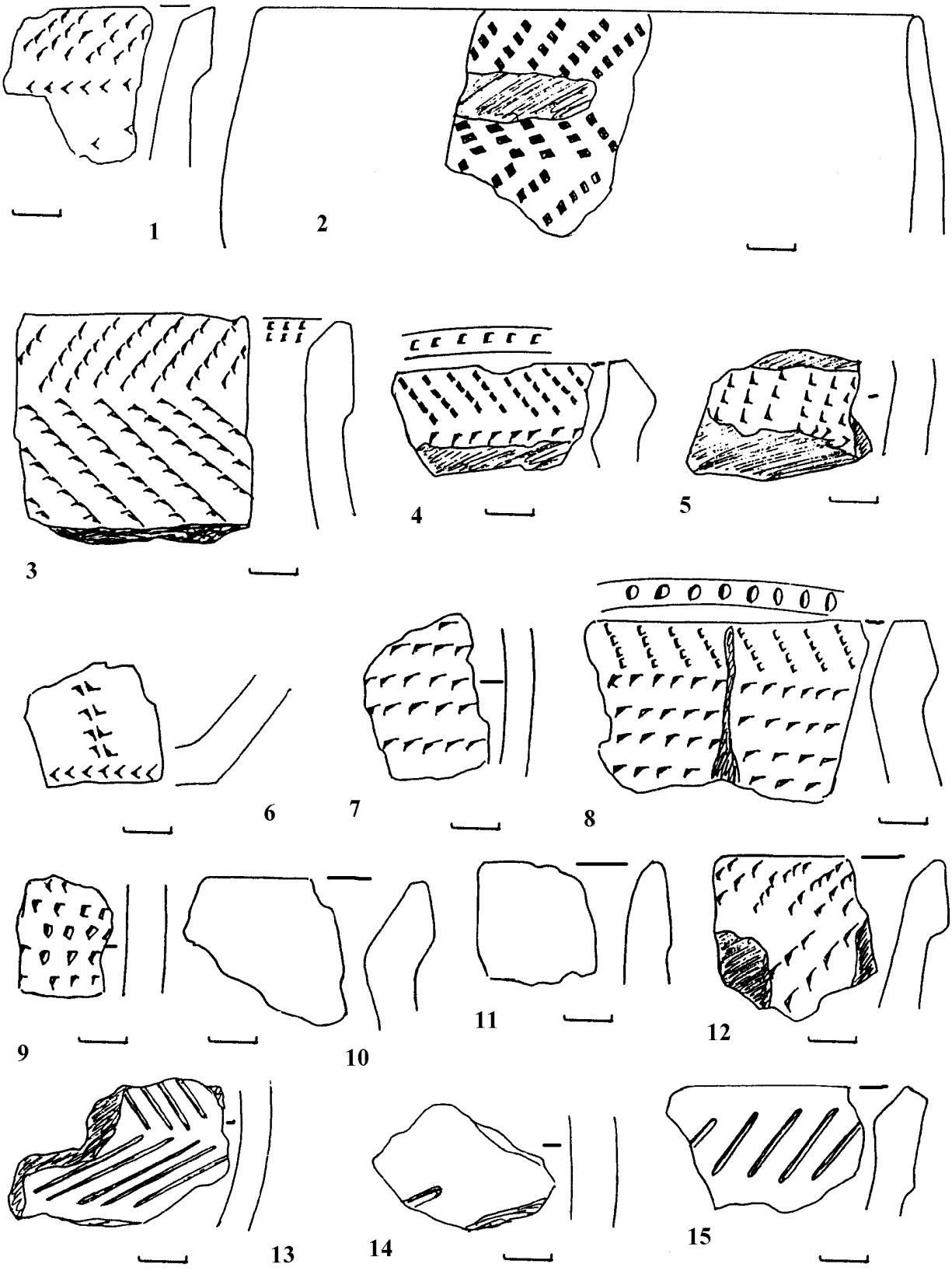
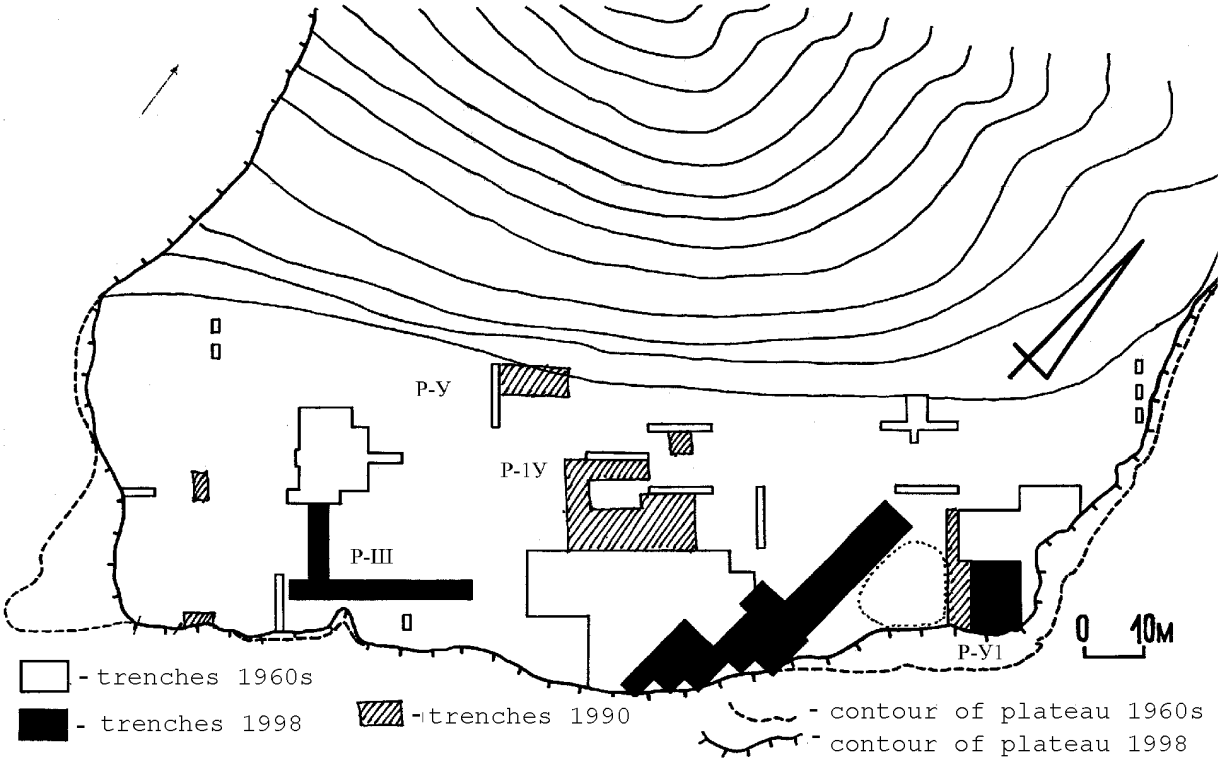


Fig. 30. Pottery of the second period of the Azov-Dnieper culture from Kamennaja Mogila 1.



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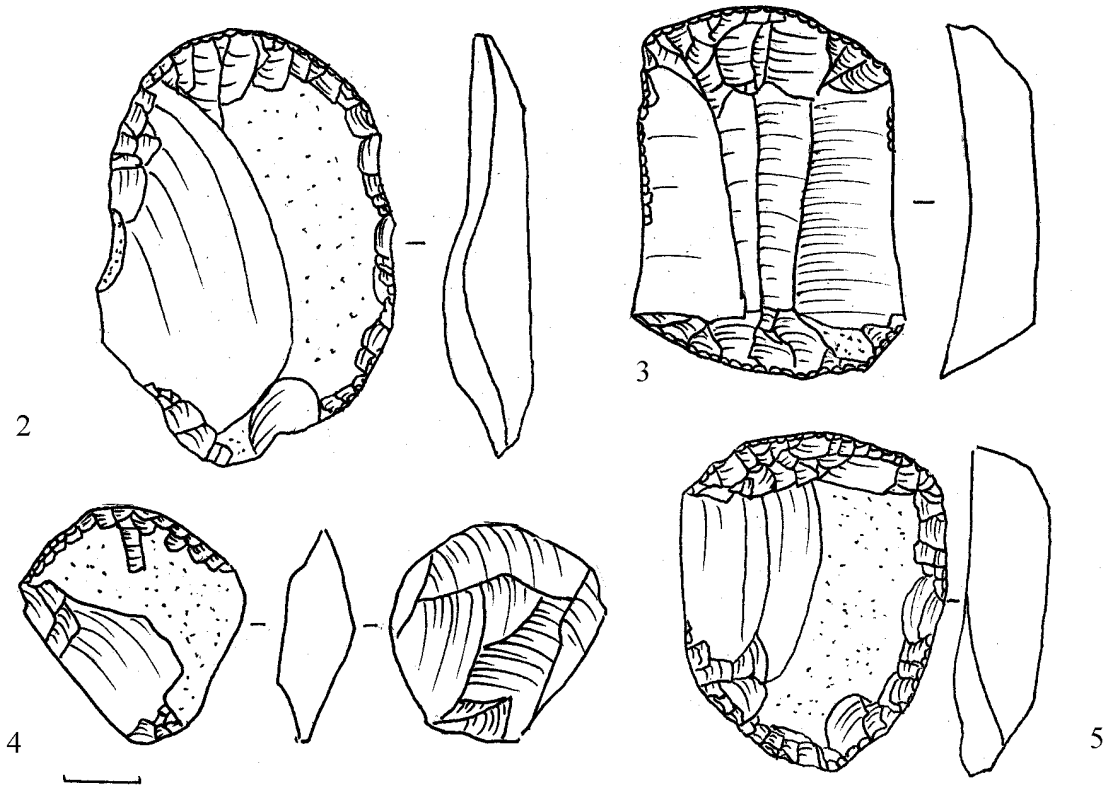


2 3 4 5

Fig. 31. Razdolnoe settlement

1 - scheme of settlement location and plans of excavation area;
2-5 - materials of the Sredniy Stog culture from archaeological trench III.

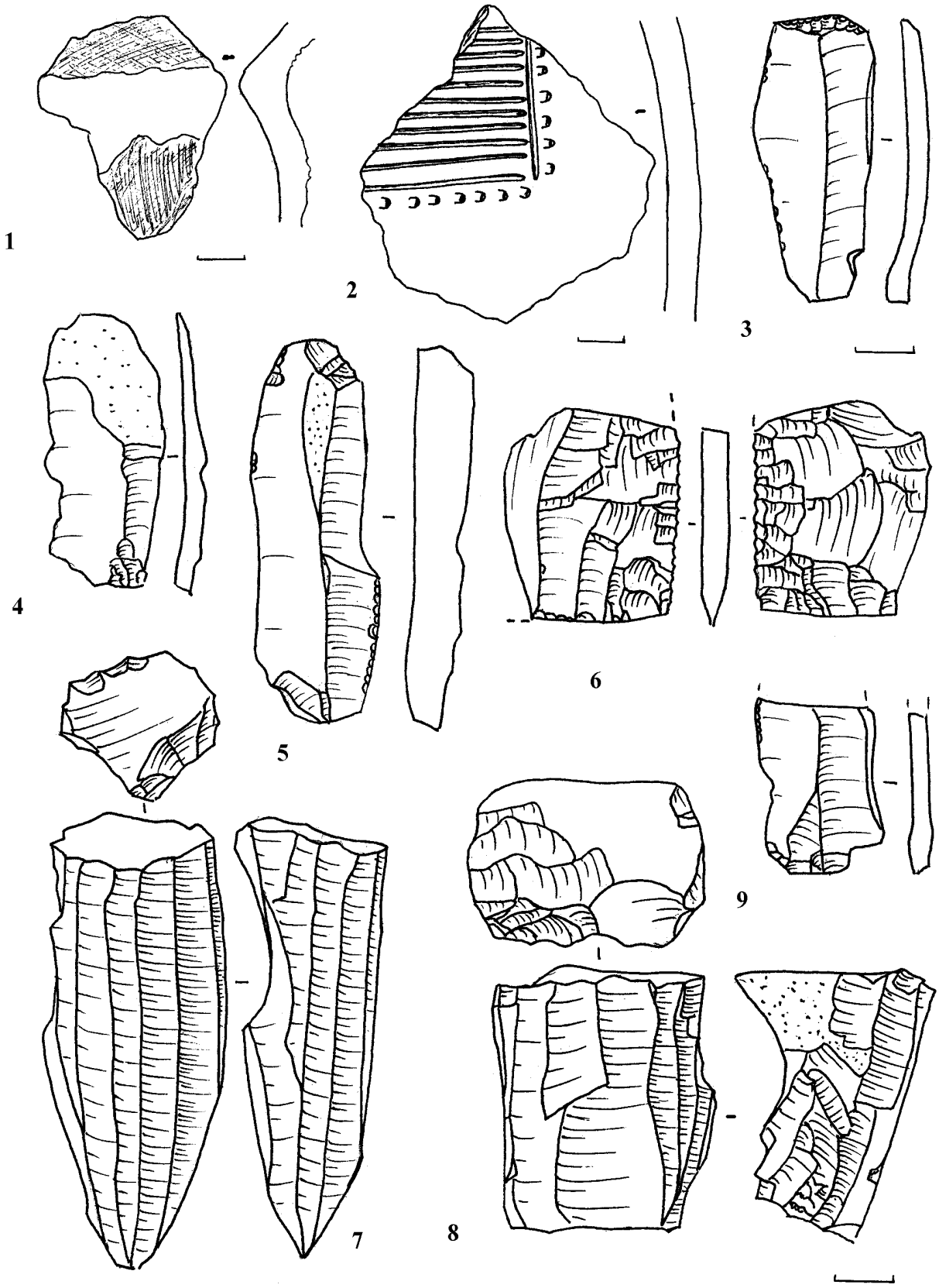


Fig. 32. Materials of the Sredniy Stog culture layer from Razdolnoe (excavation area III).

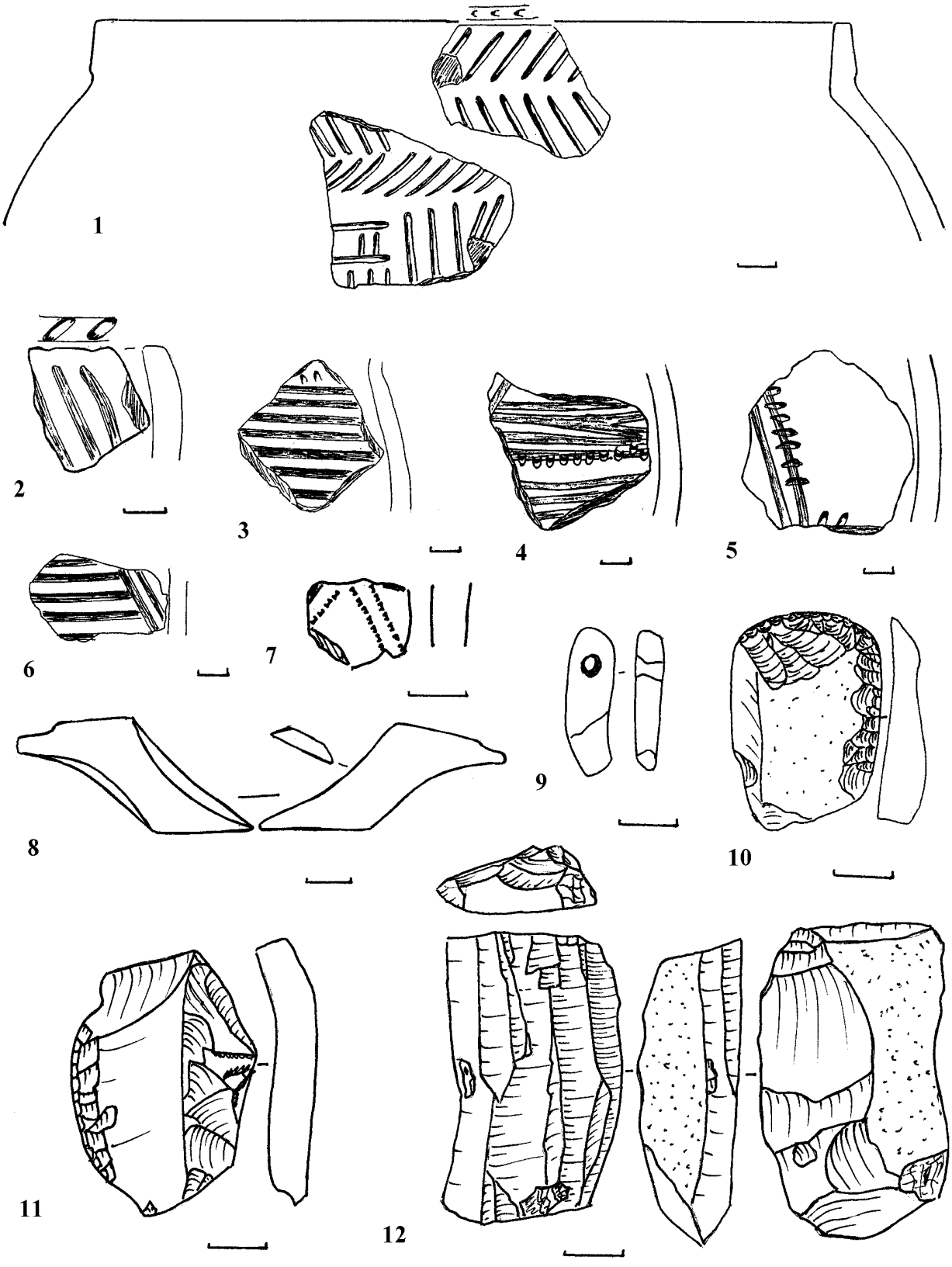


Fig. 33. Materials of the Sredniy Stog culture layer from Razdolnoe (excavation area V).

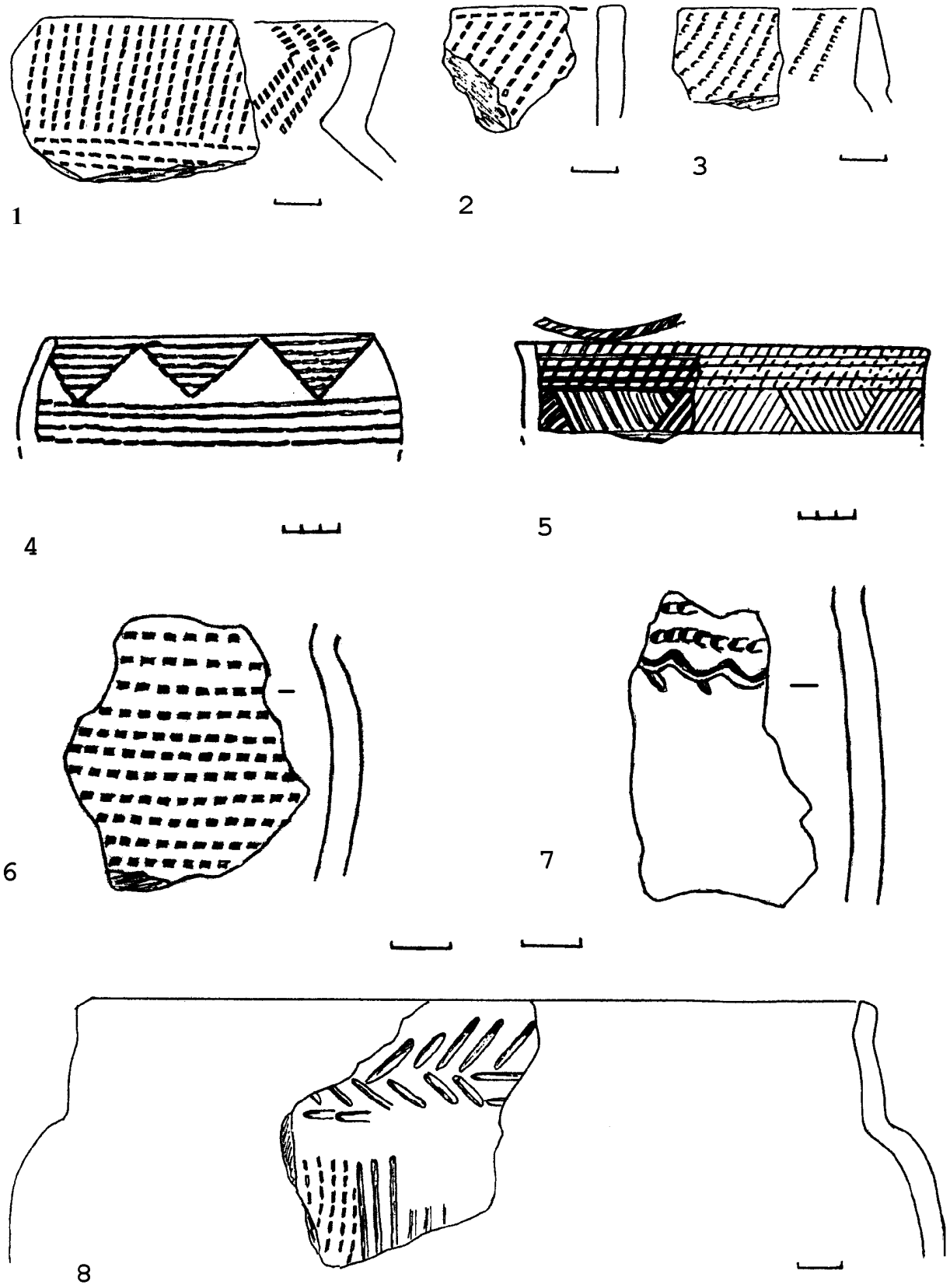


Fig. 34. Pottery of the fourth layer from Razdorskoe (4,5 after Киящко 1994).

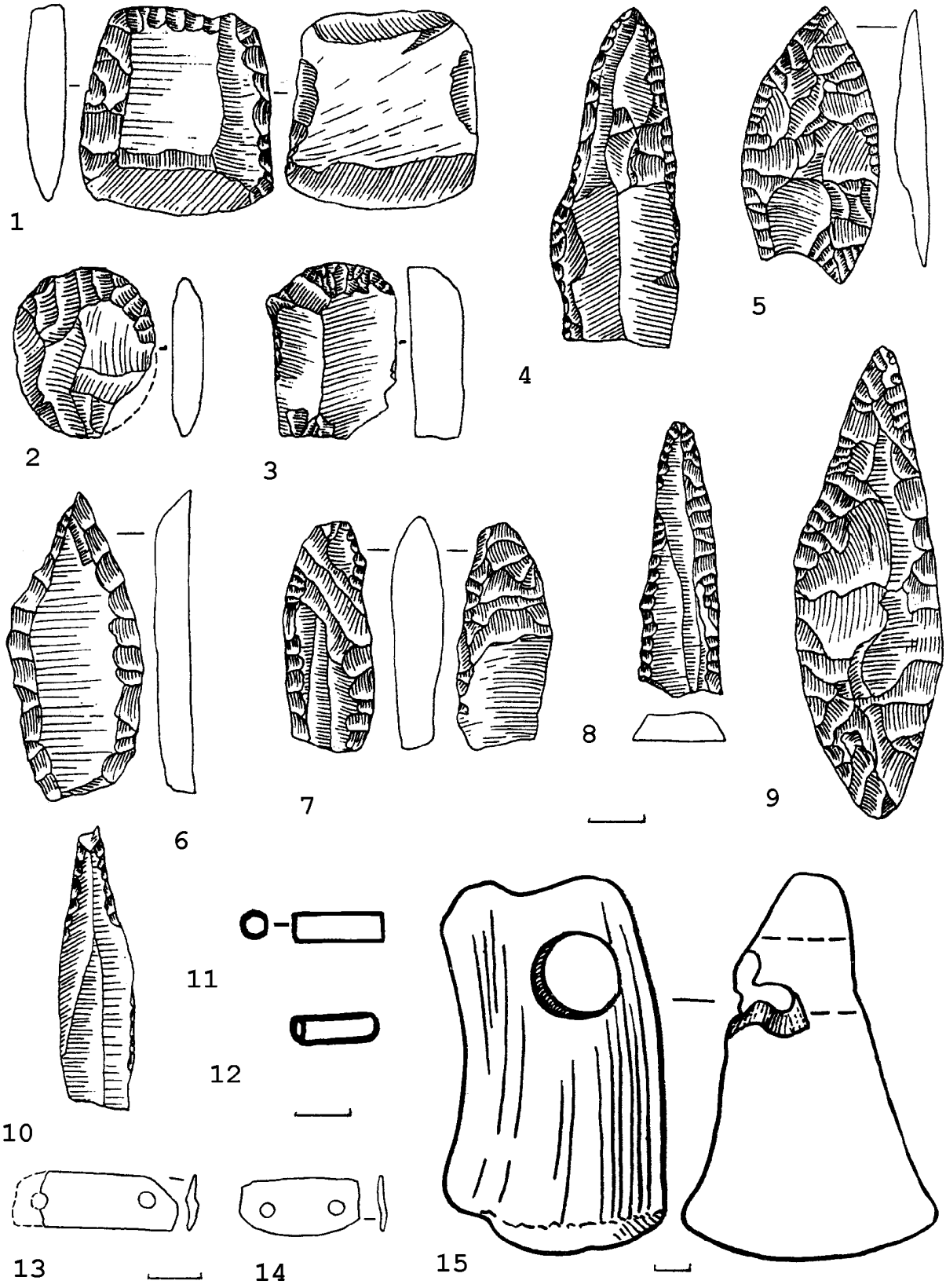


Fig. 35. Materials of the fourth layer from Razdorskoe (after Киящко 1994). 11-15 - bone

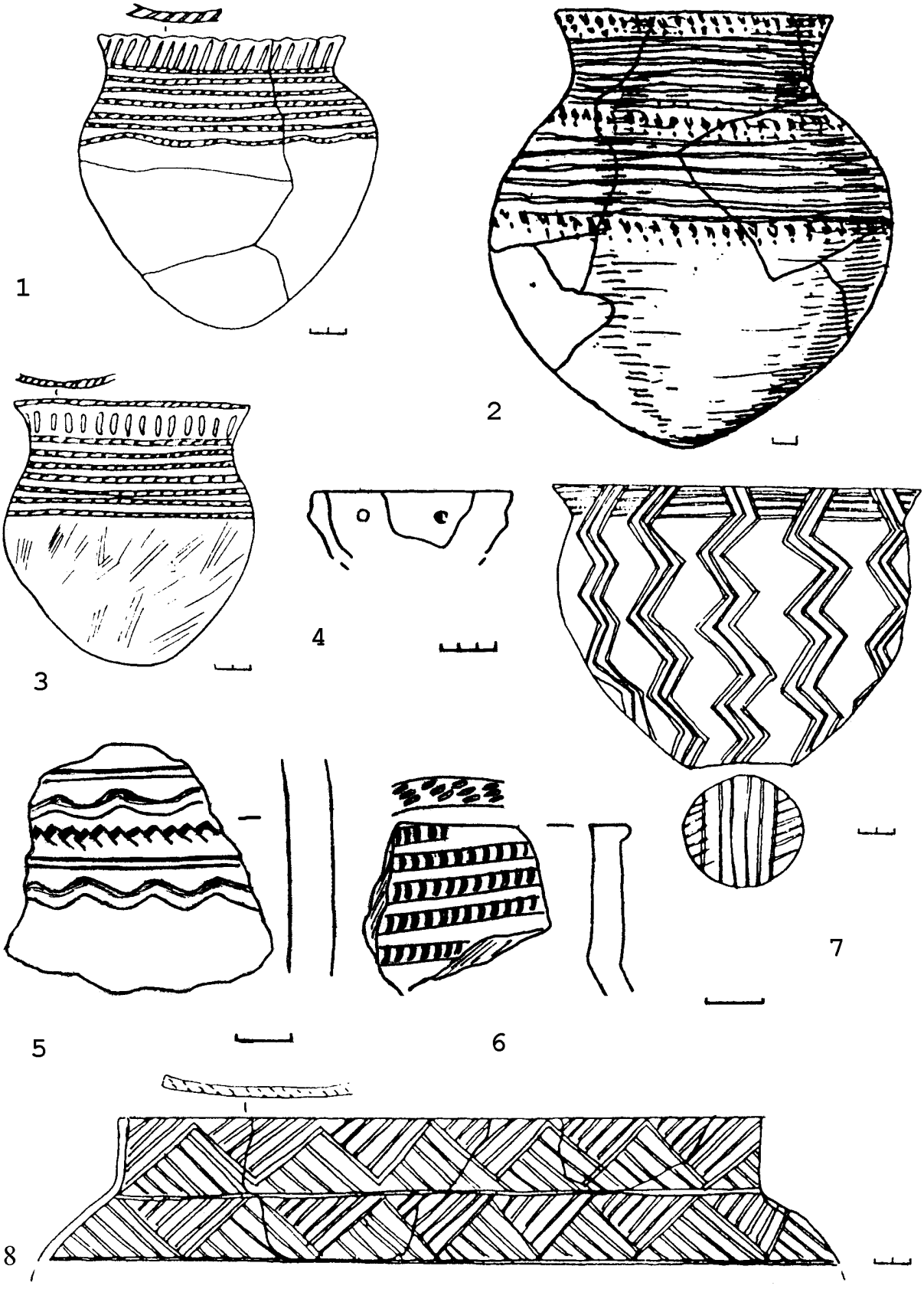


Fig. 36. Pottery of the fifth layer from Razdorskoe

1-3 - upper horizon of the fifth layer; 4-8 - lower horizon of the fifth layer (1-4; 7,8 - after Киященко 1994).

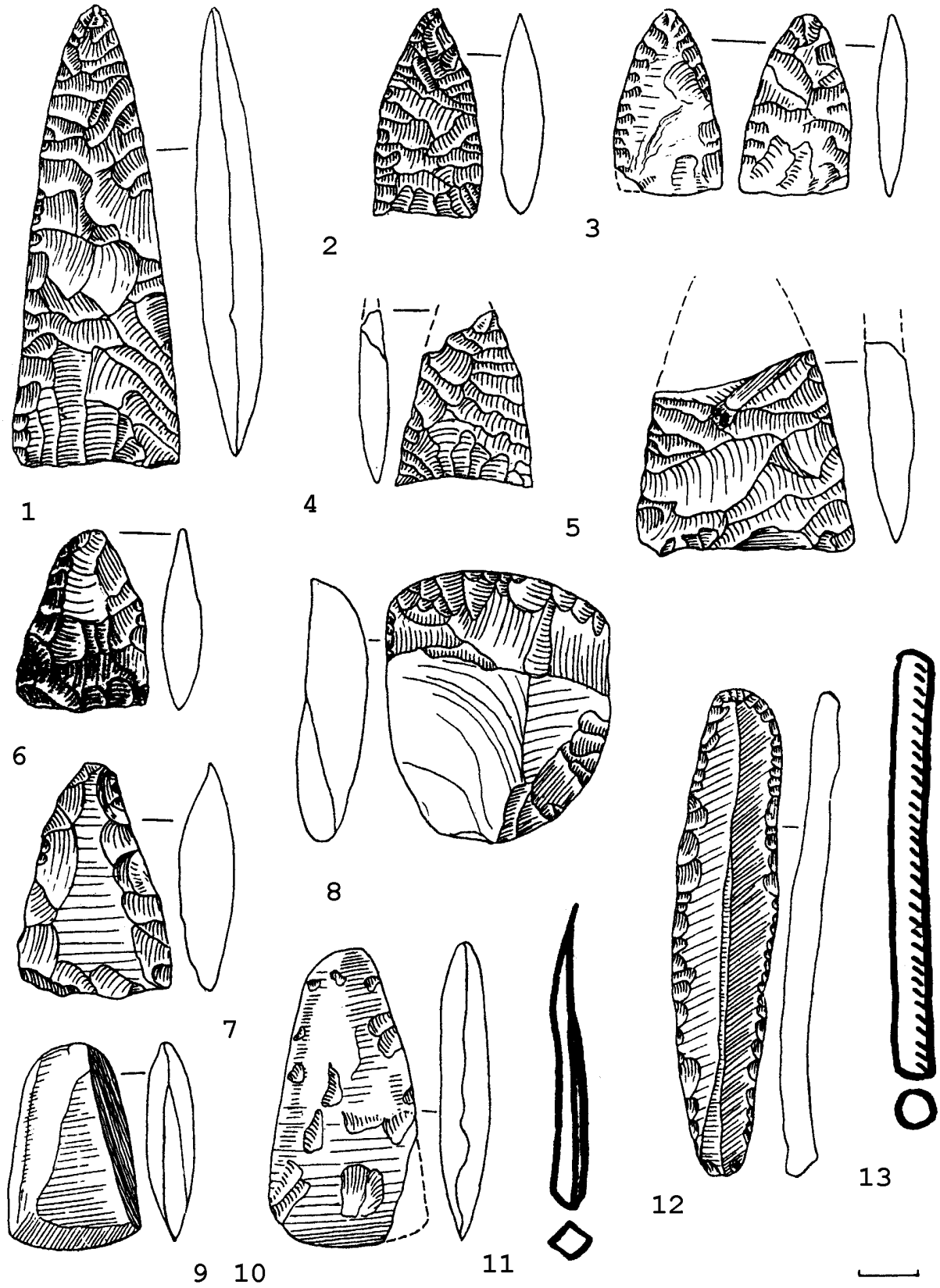


Fig. 37. Materials of the fifth layer from Razdorskoe (after Киященко 1994). 11 - copper; 13 - bone.

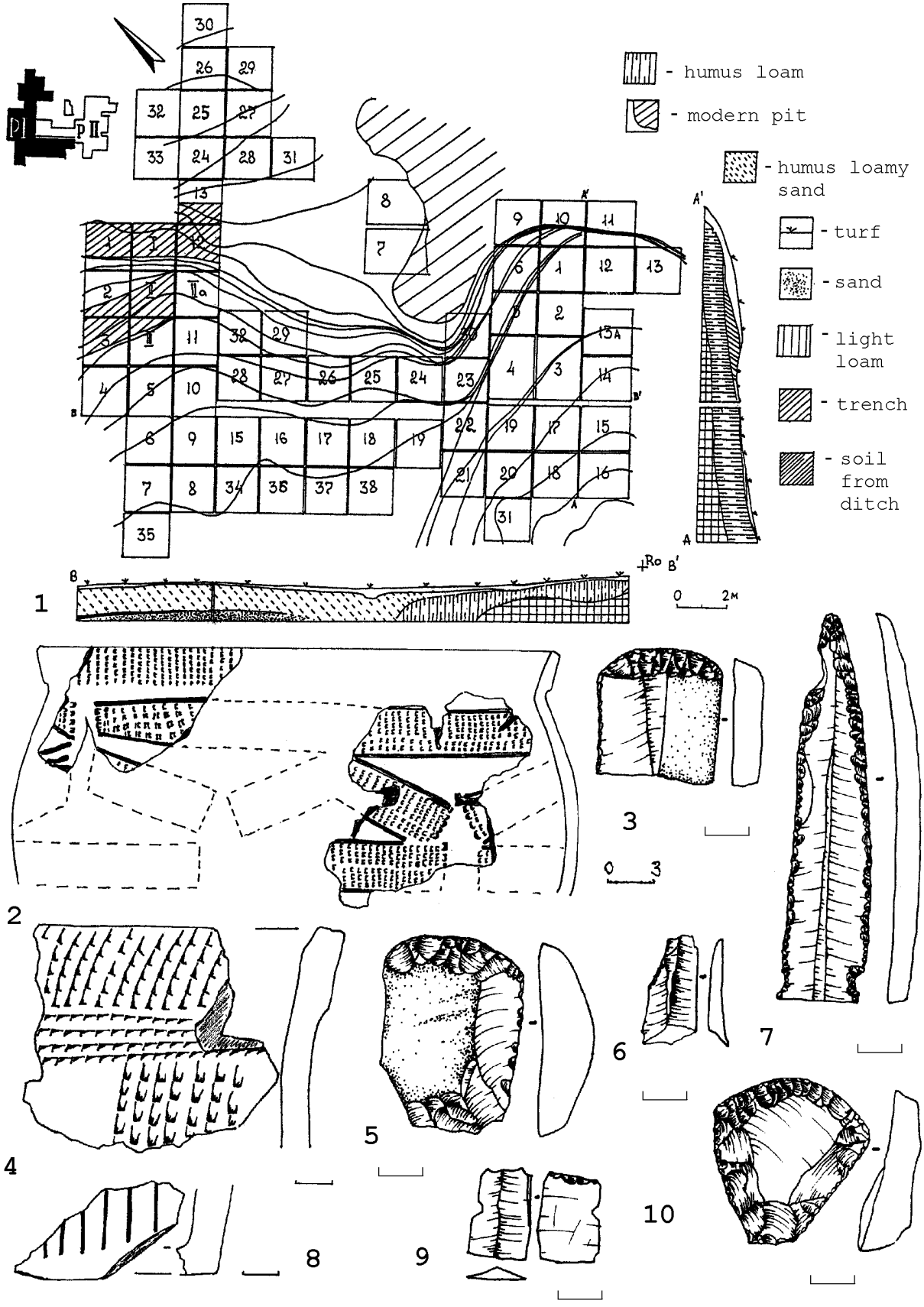


Fig. 38. Semenovka settlement

1 - plan of archaeological trenches and profiles; 2-10 - materials of the second period of the Azov-Dnieper culture from the second layer

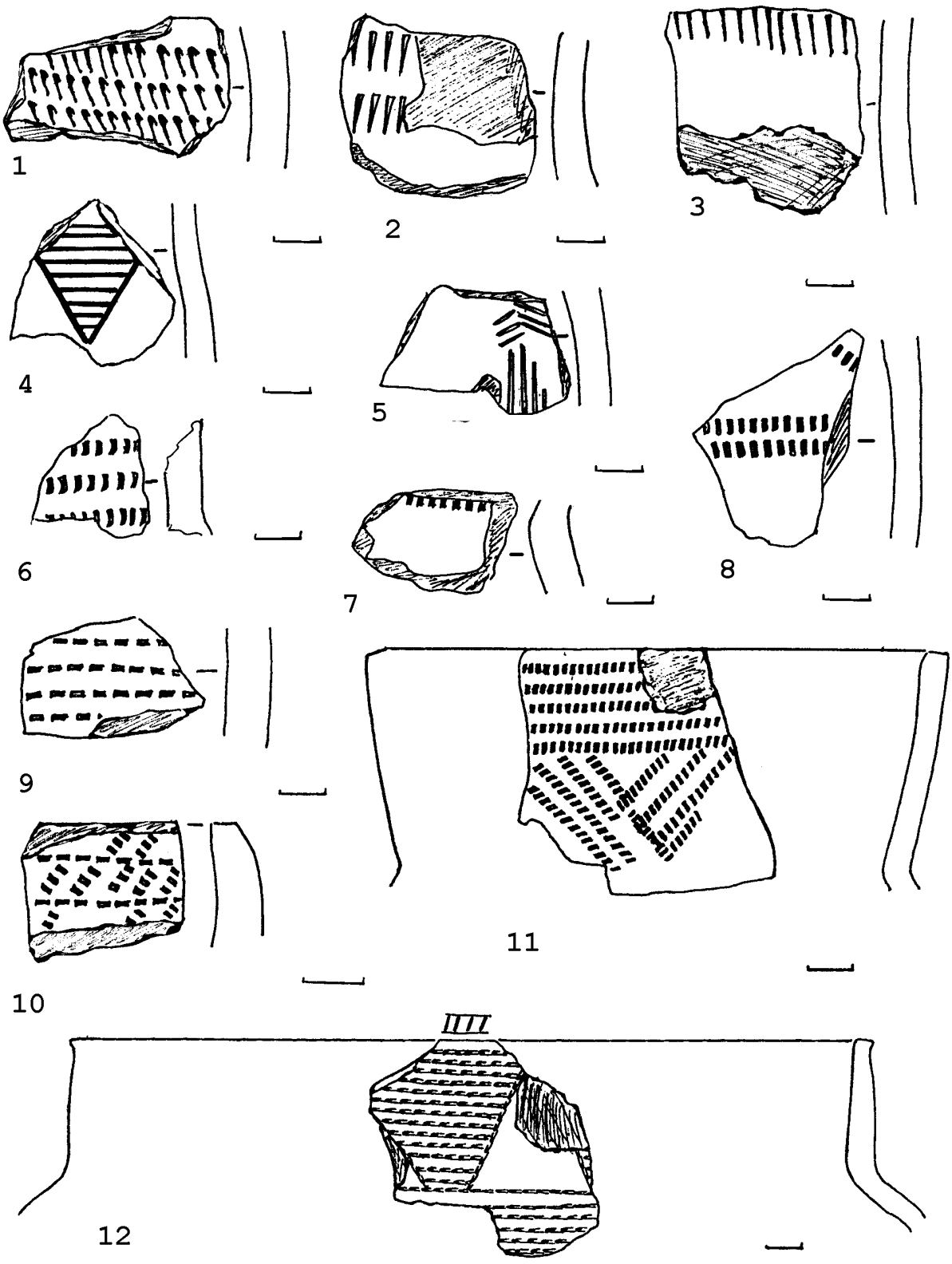


Fig. 39. Pottery of the Sredniy Stog culture from Semenovka (third layer).

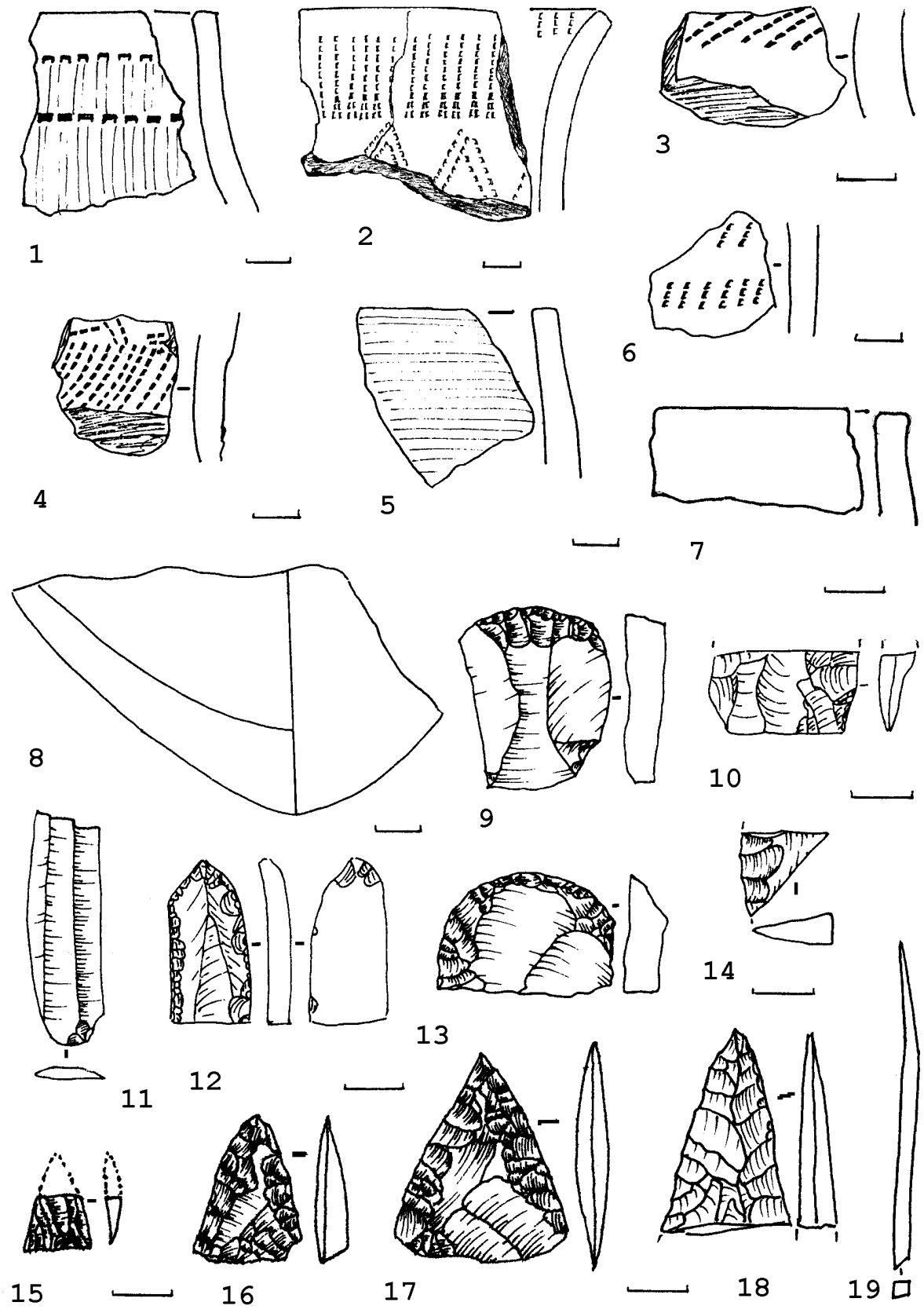


Fig. 40. Materials of the Sredniy Stog culture from Semenovka
19 - copper.

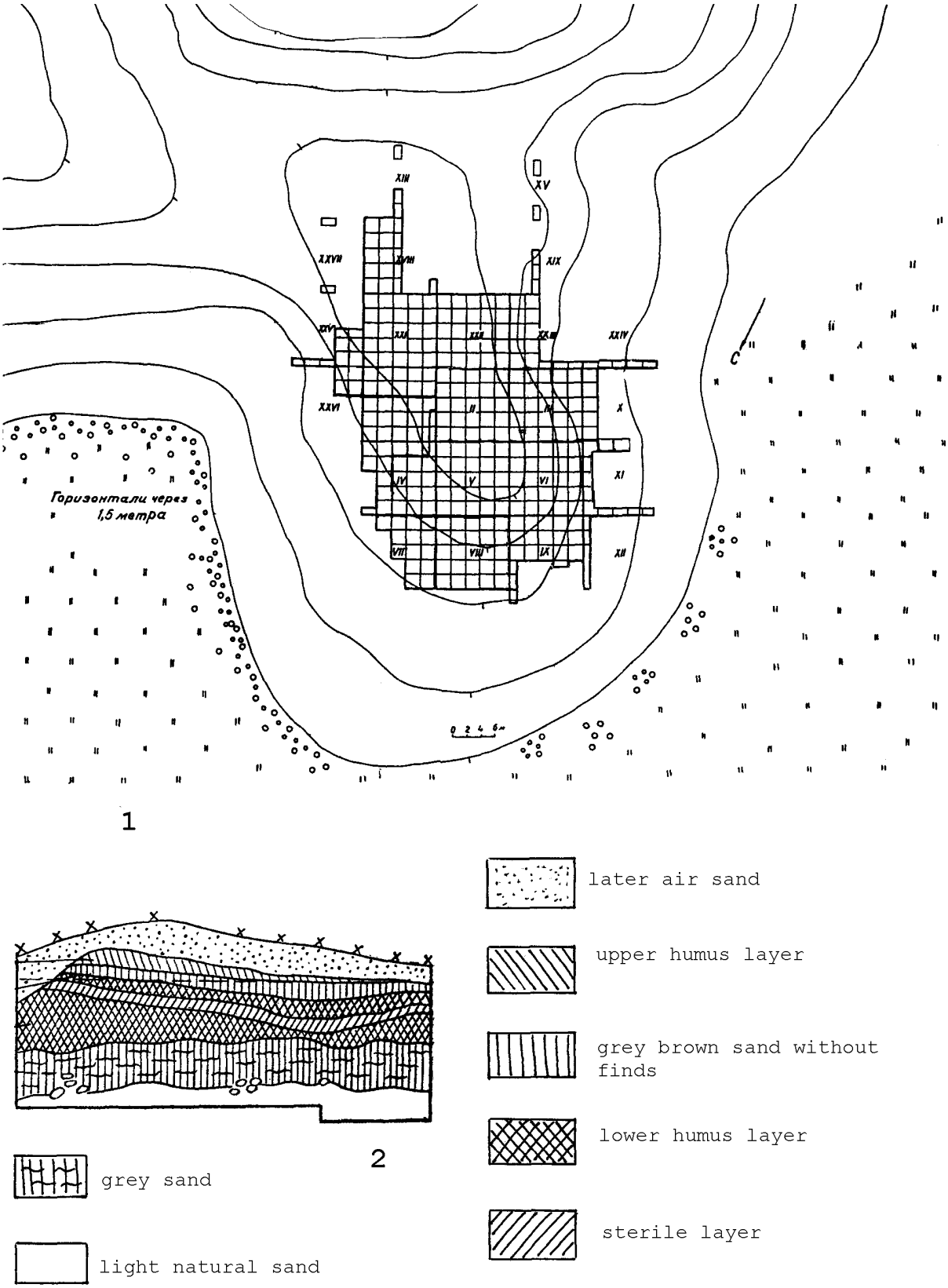


Fig. 41. Topographic plan and section of Alexandria

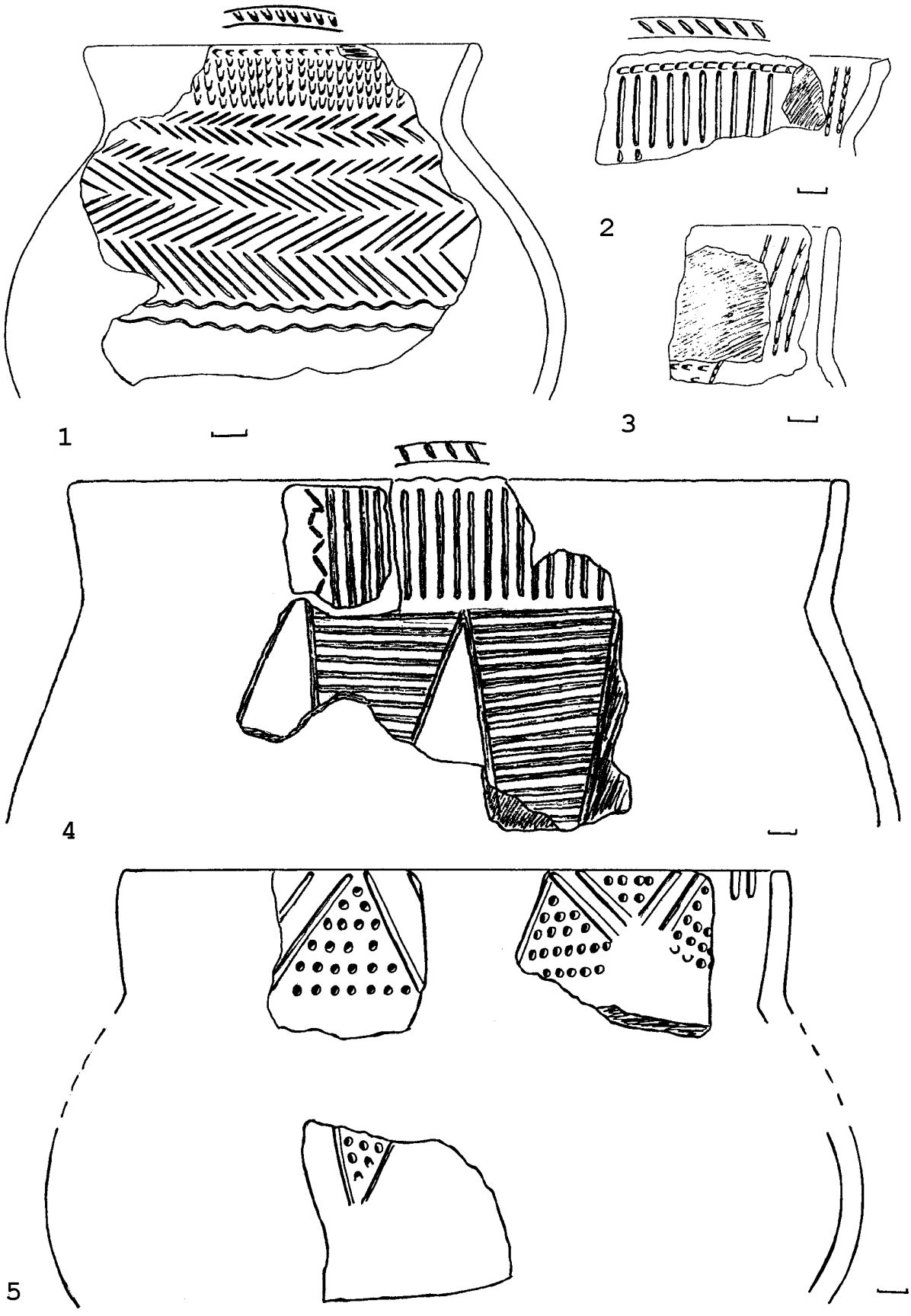


Fig. 42. Pottery of the Sredniy Stog culture from Alexandrija.

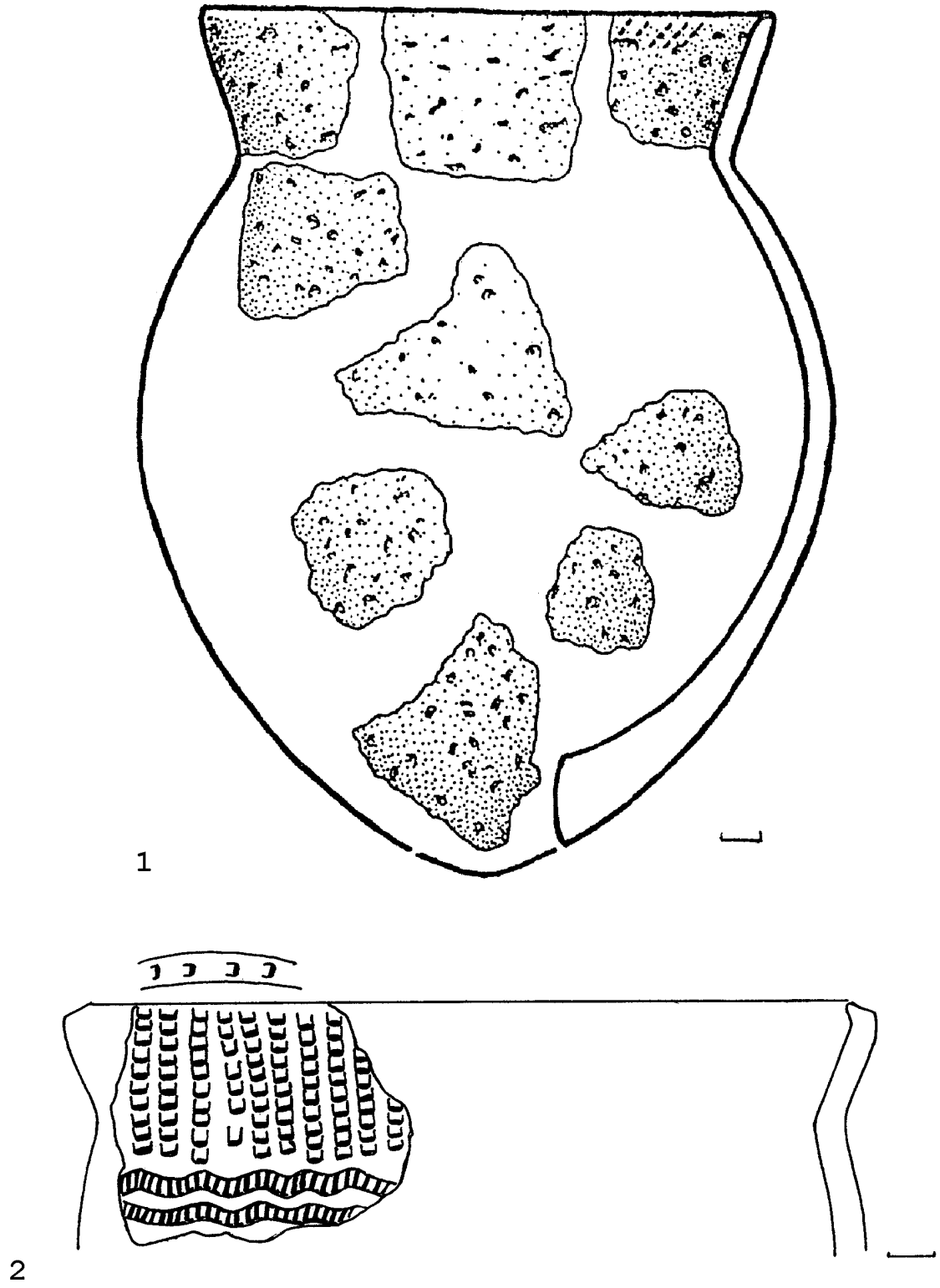


Fig. 43. Pottery of the Sredniy Stog culture
1 - Chernikovo ozero 1; 2 - Alexandrija.

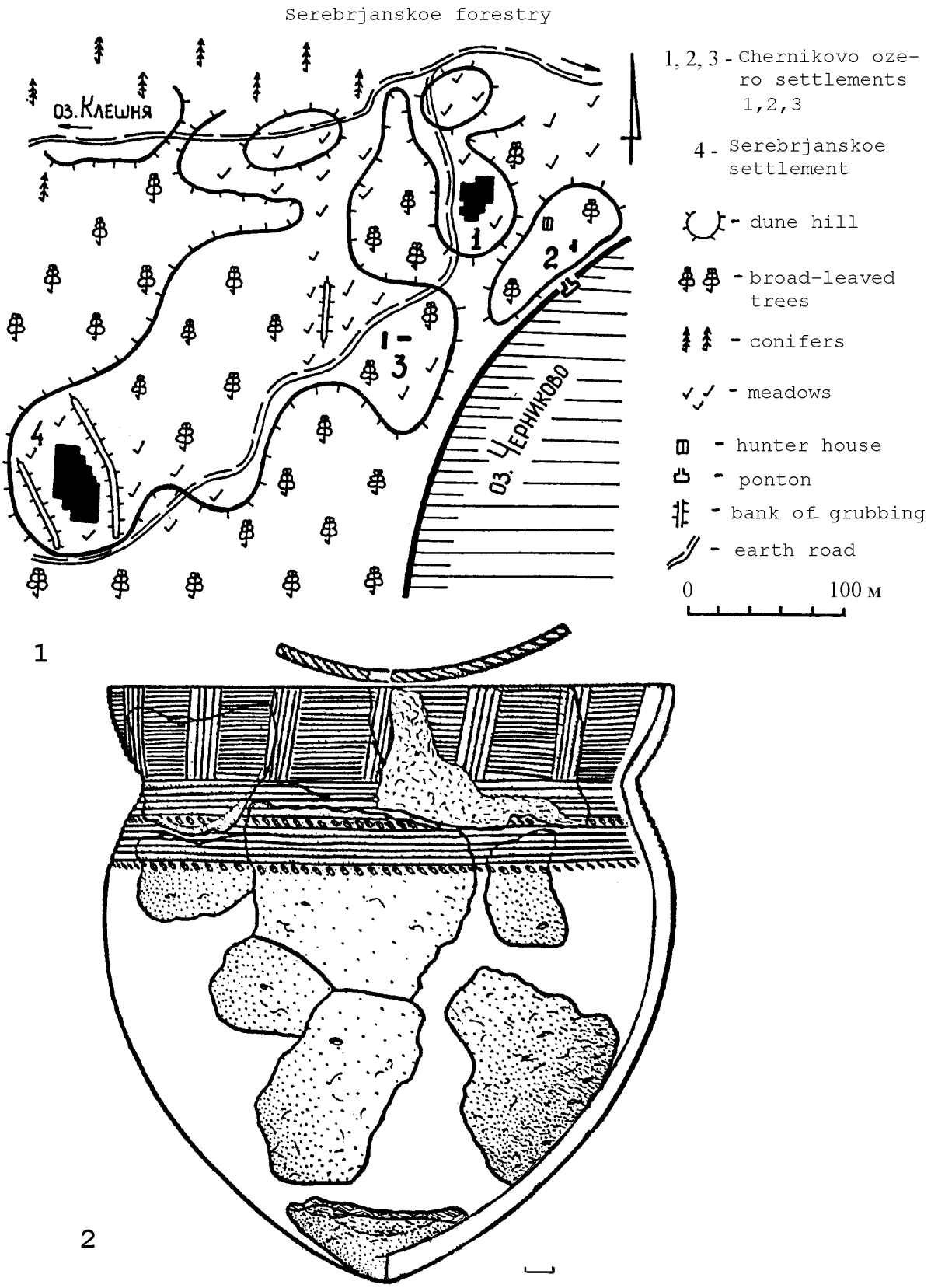


Fig. 44. Scheme of sites location in Chernikovo ozero area (1); pottery of the Sredniy Stog culture from Serebrjanskoe (2).

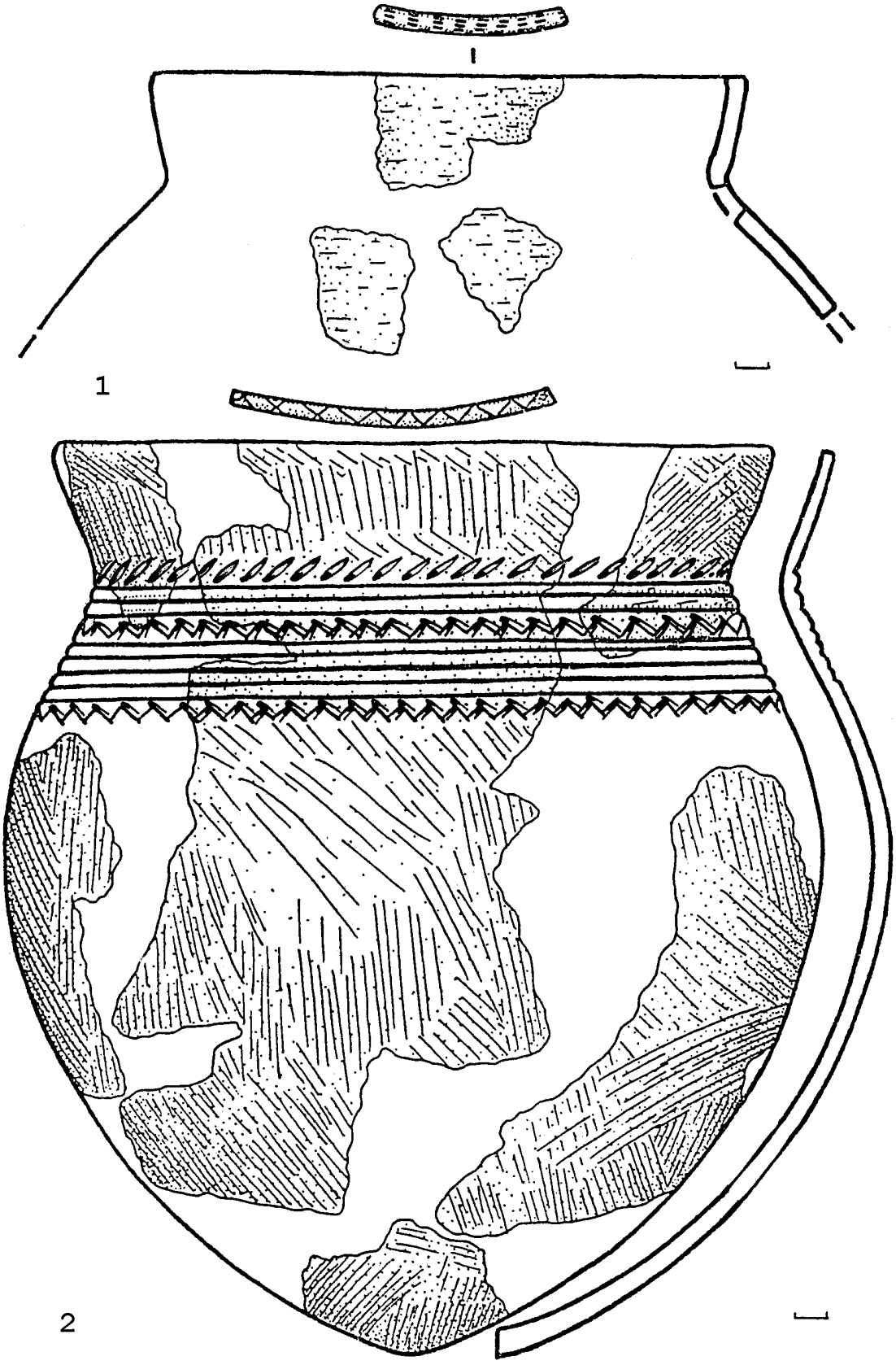


Fig. 45. Pottery of the Sredniy Stog culture from Chernikovo ozero 1.

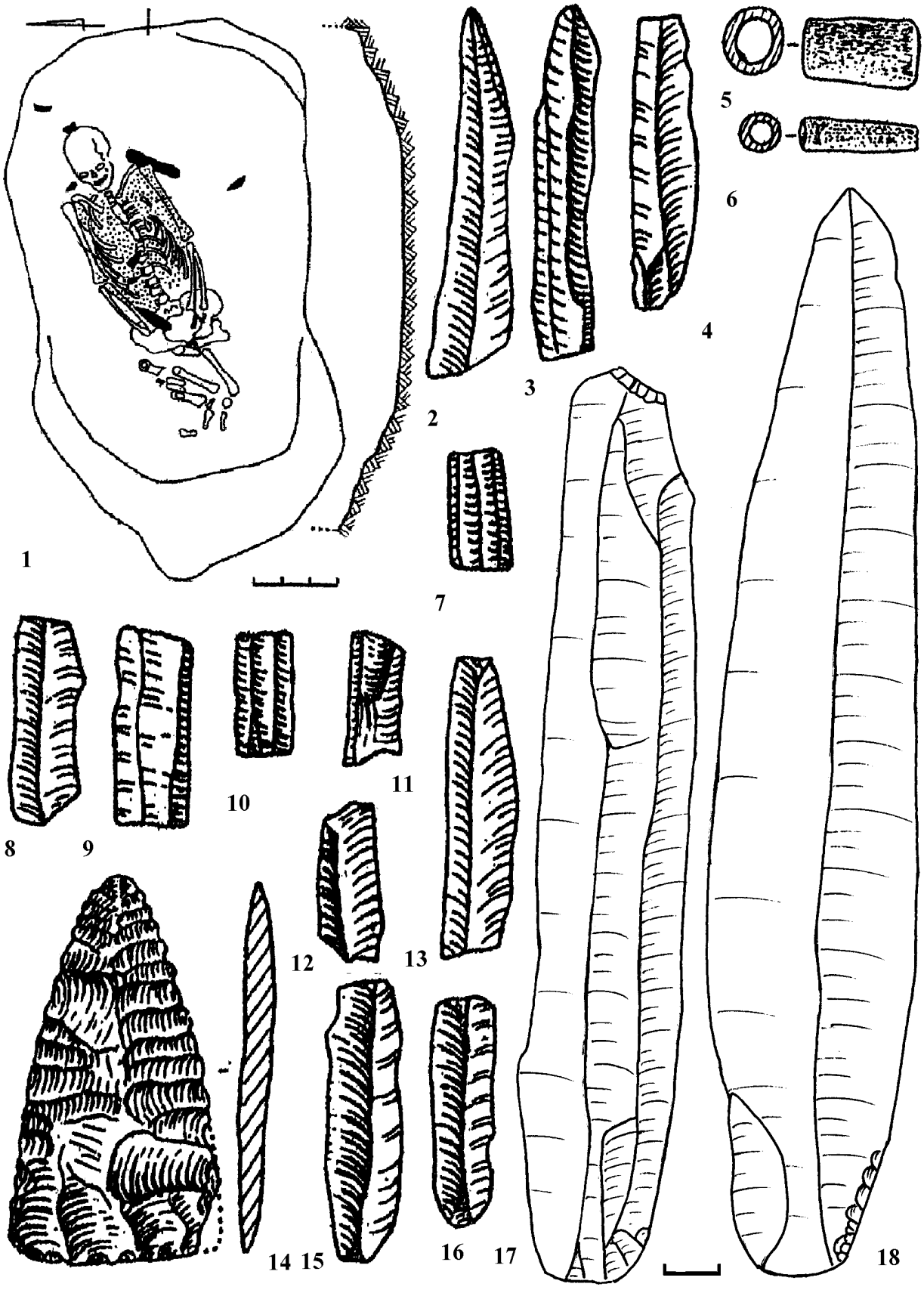


Fig. 46. Alexandrovsk cemetery, kurgan 1 burial 9 (after Братченко, Константинеску 1987). 5,6 - bone.

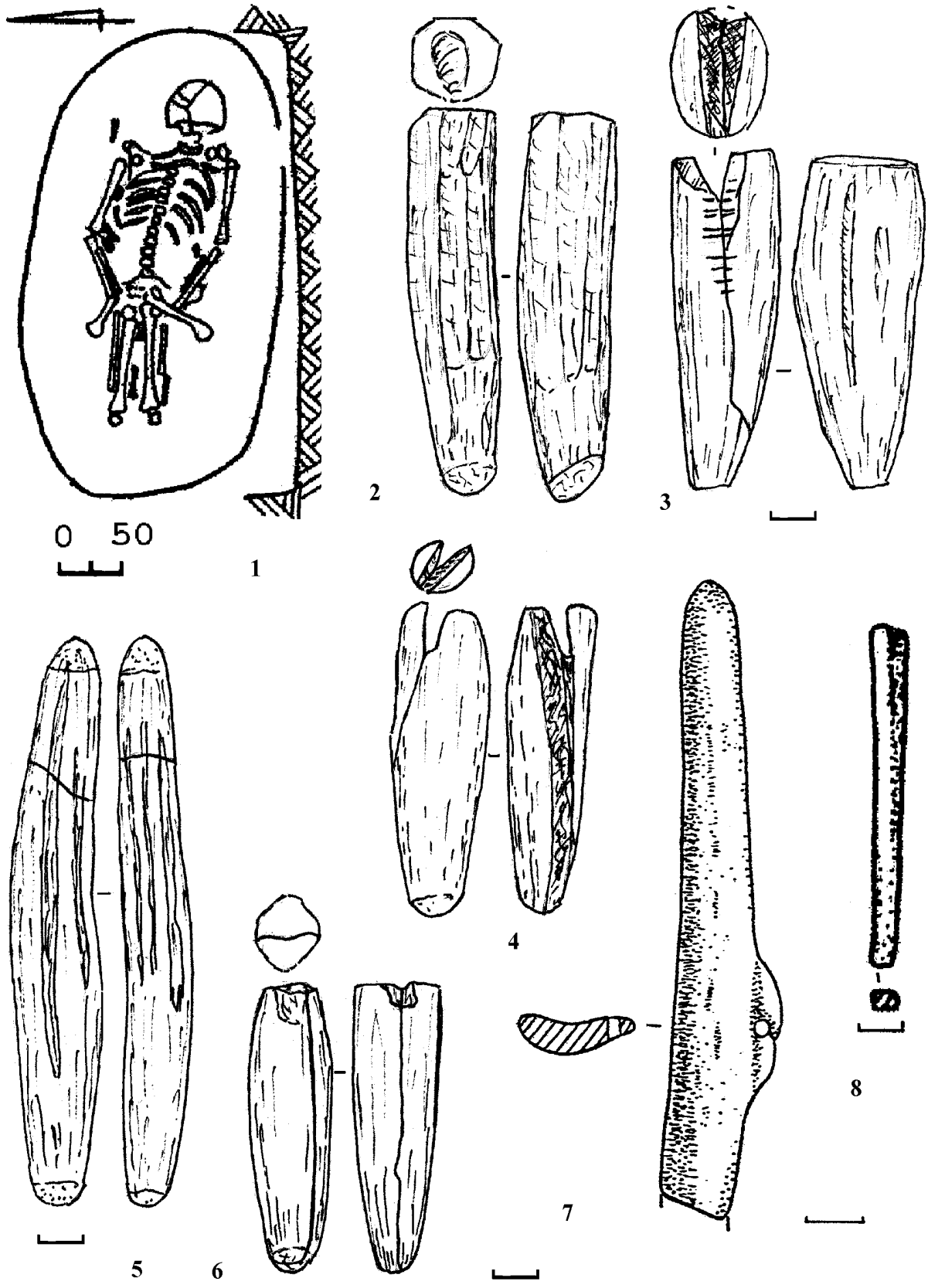


Fig. 47. Alexandrovsk cemetery, kurgan 1 burial 46 (1,7,8 - after Братченко, Константинеску 1987). 2-8 - bone.

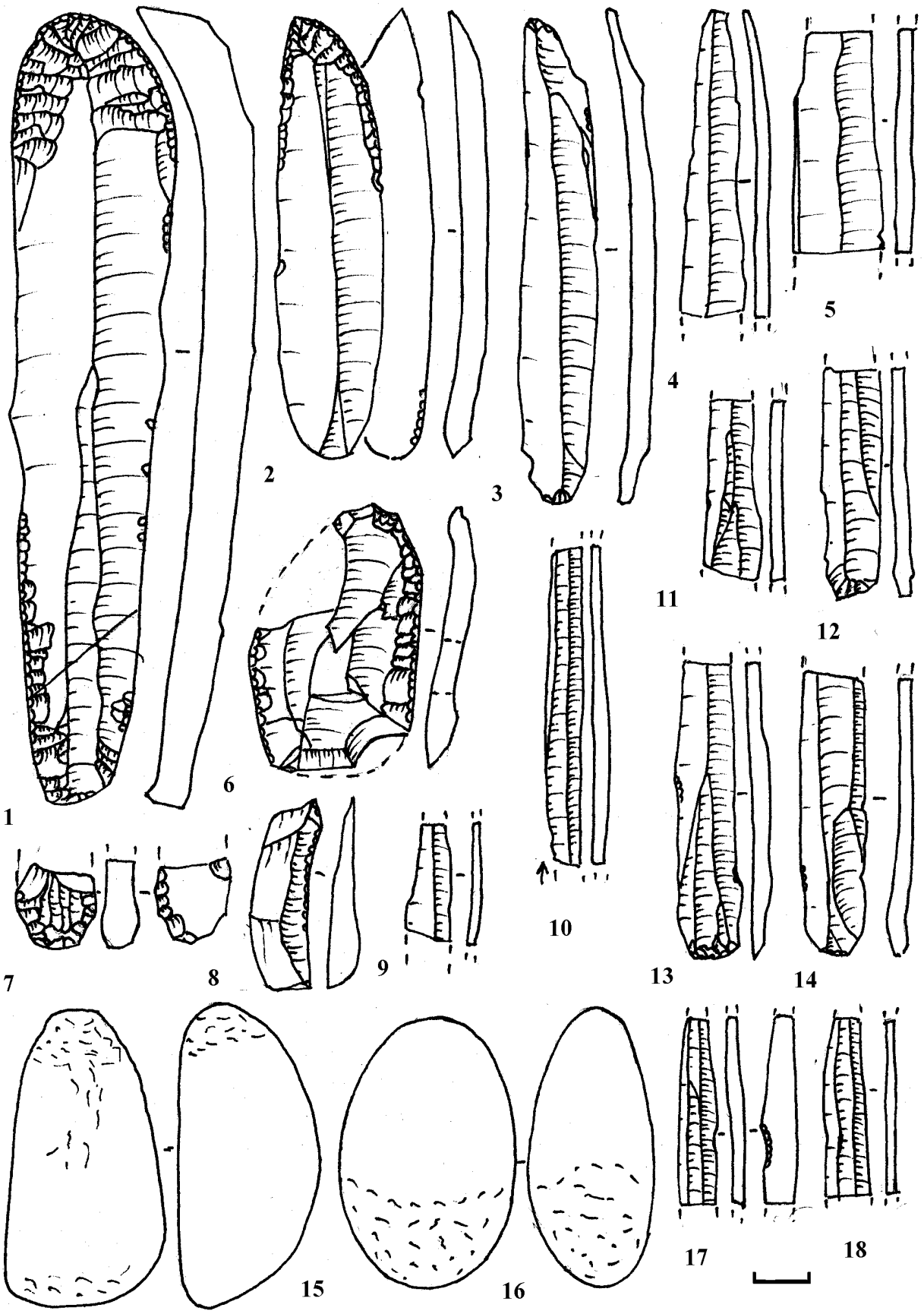


Fig. 48. Grave goods from kurgan 1 burial 46 from Alexandrovsk cemetery
15,16 - pebbles.

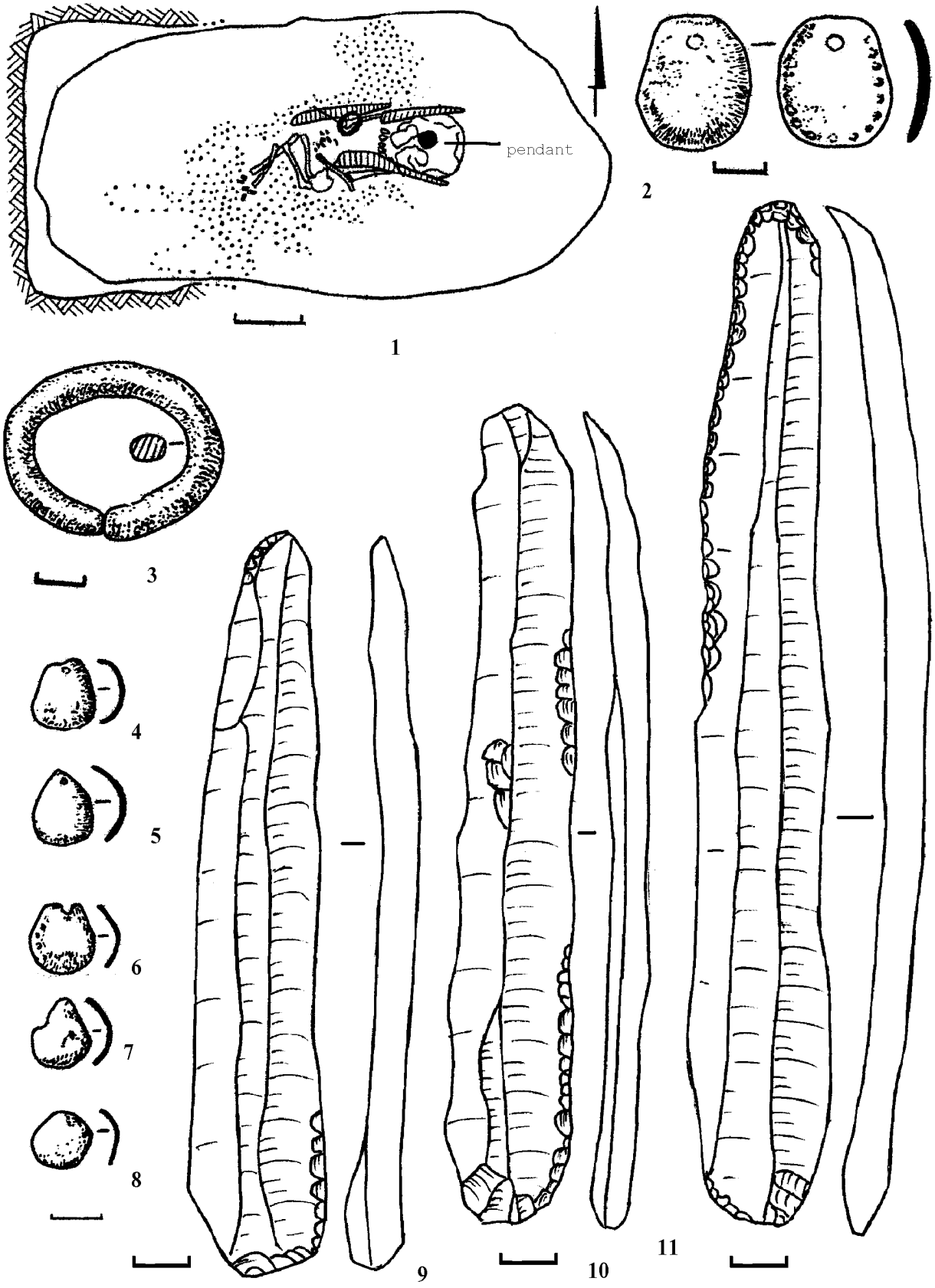


Fig. 49. Alexandrovsk cemetery, kurgan 10 burial 10 (after Братченко, Константинеску 1987). 2-8 - copper.

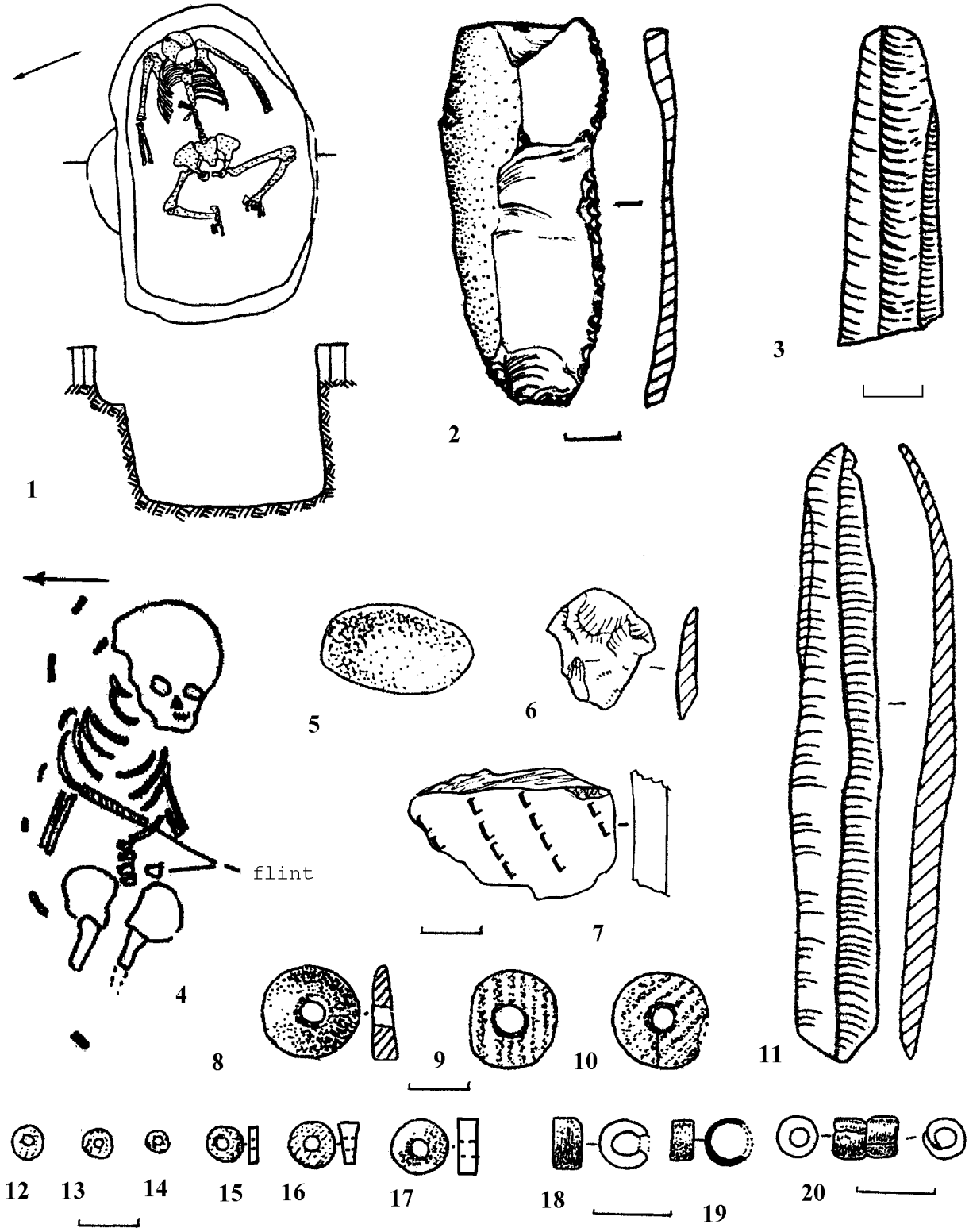


Fig. 50. Burials of the Sredniy Stog culture

1,2 - Vinogradnoe, kurgan 3 burial 15 (after Рассамакин 1987); 3-6 - Alexandrovsk cemetery, kurgan 10 burial 17; 7-20 - Alexandrovsk cemetery, kurgan 1 burial 55 (3-6,8-14,18-20 - after Братченко, Константинеску 1987); 5 - pebble; 7-17 - nacre; 18-20 - copper.

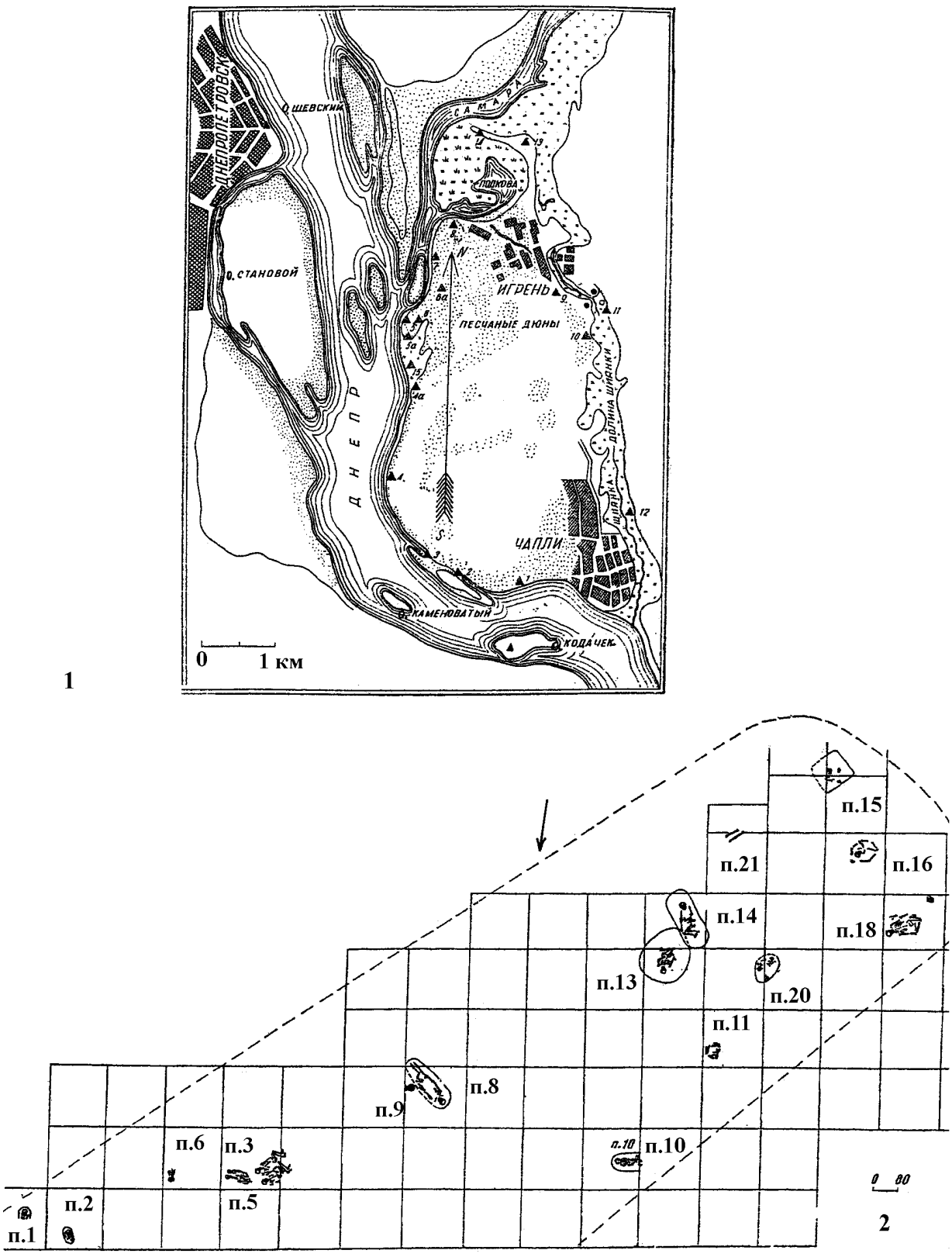


Fig. 51. Igren cemetery

1 - plan of sites location on Igren peninsula; 2 - schema of a part of Igren Eneolithic cemetery (after Телегин, Филенко 1982).

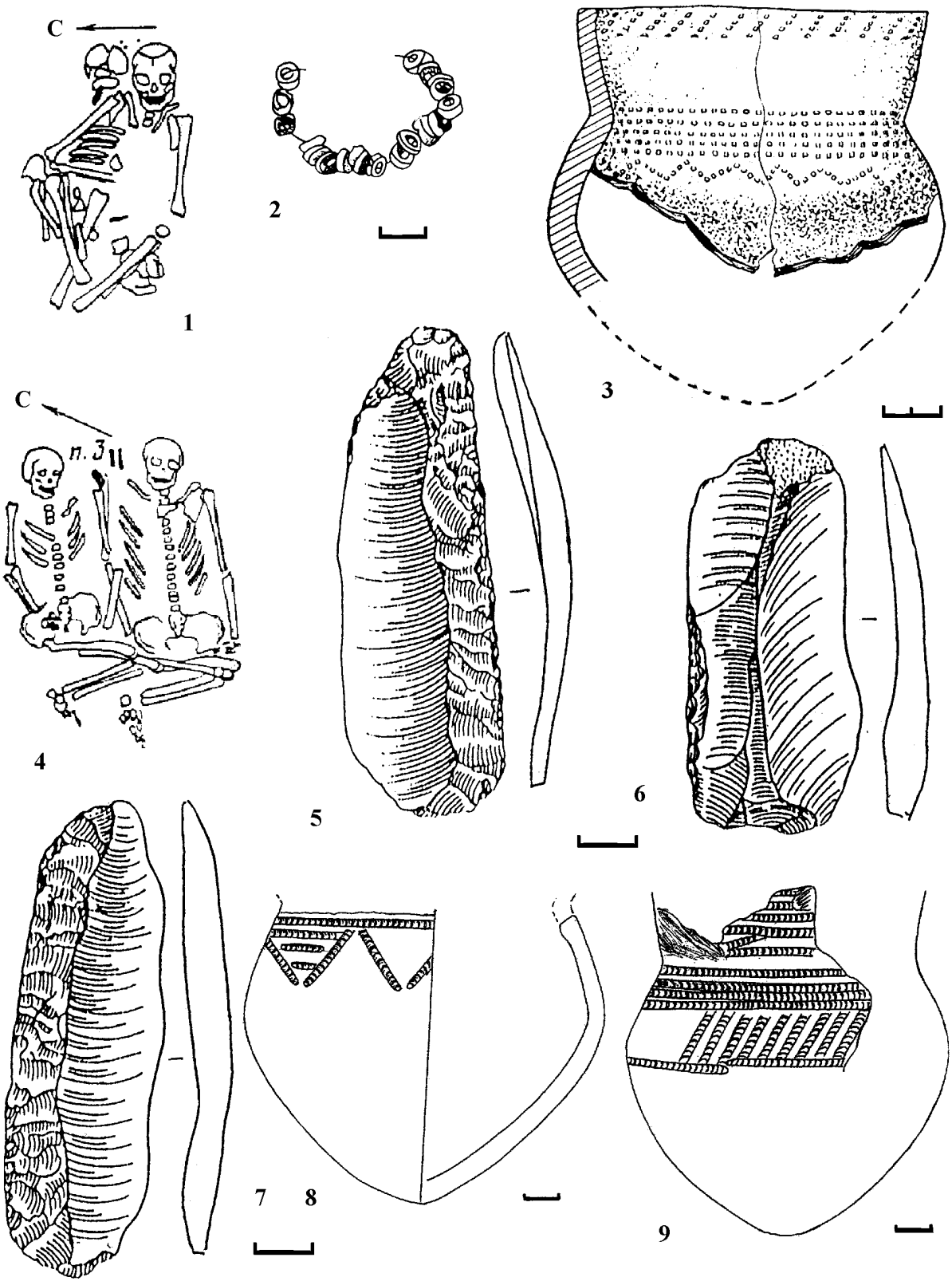


Fig. 52. Igren cemetery

1,2 - burial 5; 3 - vessel from archaeological layer (?); 4-7 - burial 3; 8 - vessel from burial 1 (Miller's excavation); 9 - vessel from burial 15 (1,2,4-7 - after Телегин, Филенко 1982; 3 - after Даниленко 1974).

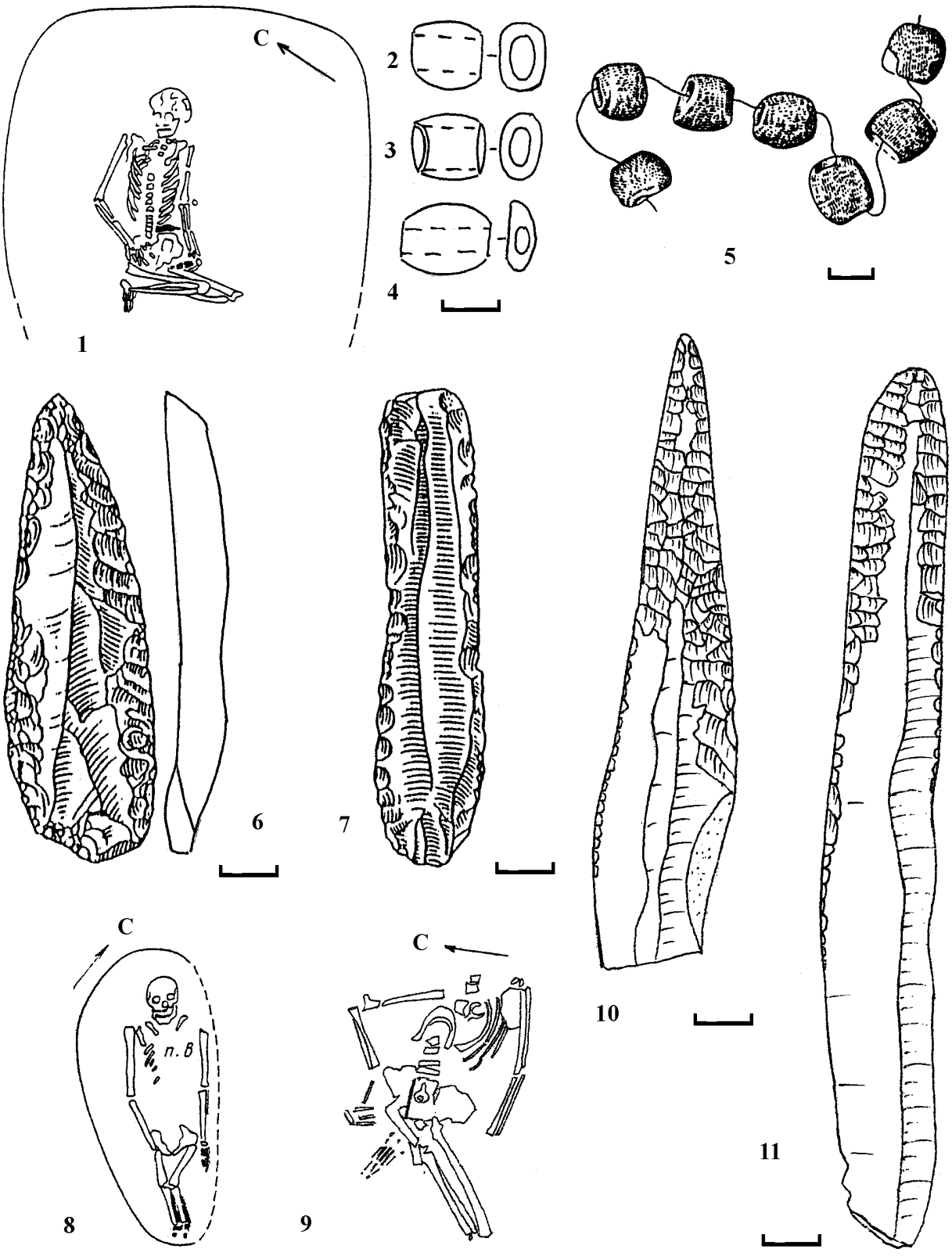


Fig. 53. Igren cemetery

1-6 - burial 10; 7,8 - burial 8; 9-11 - burial 11 (Dobrovolskiy's excavation). 1,5-8 - after Телегин, Филенко 1982; 9 - after Добровольский).

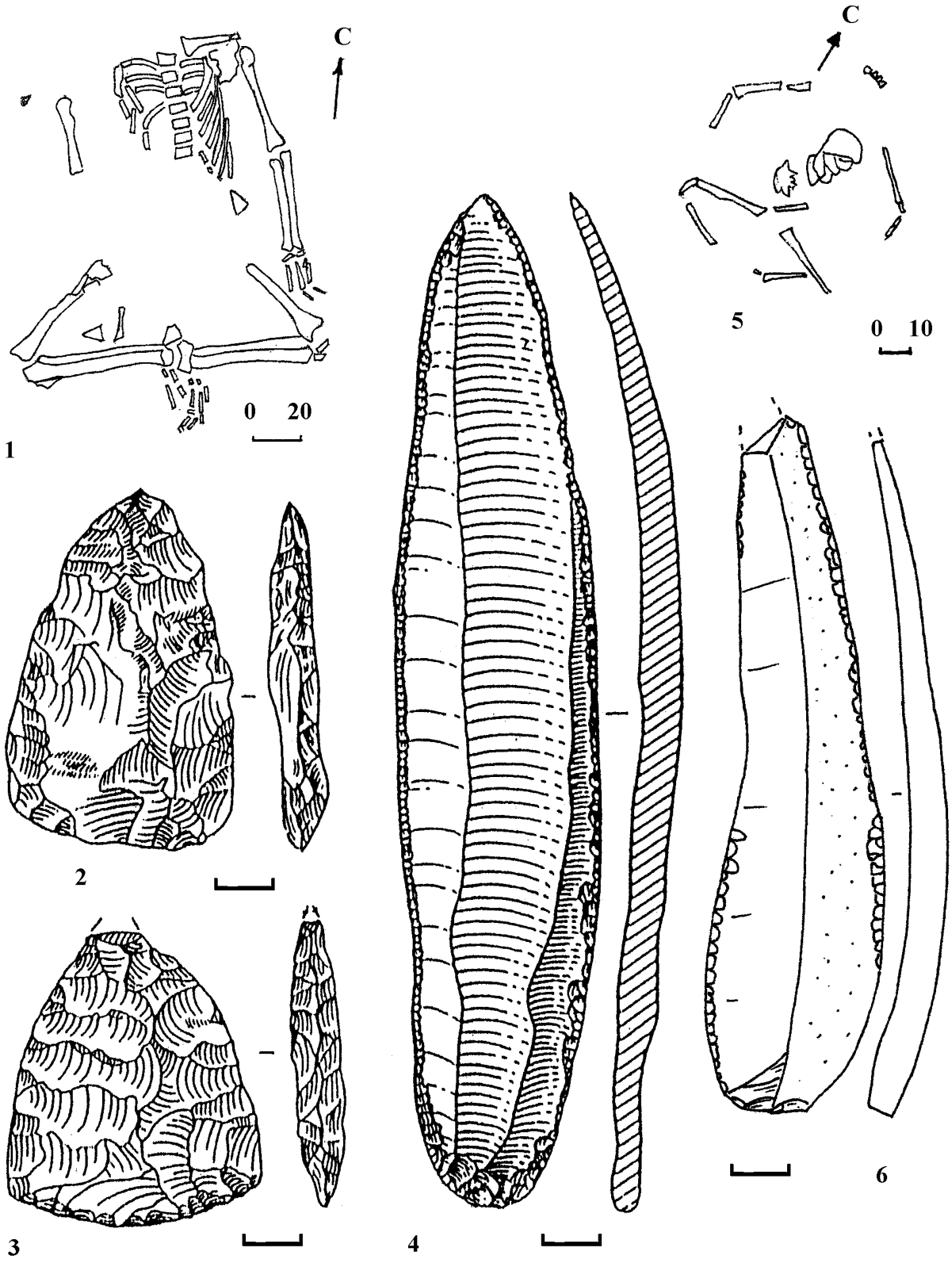


Fig. 54. Igren cemetery

1-4 - burial 17; 5,6 - burial 16 (1-5 - after Телегин, Филенко 1982).

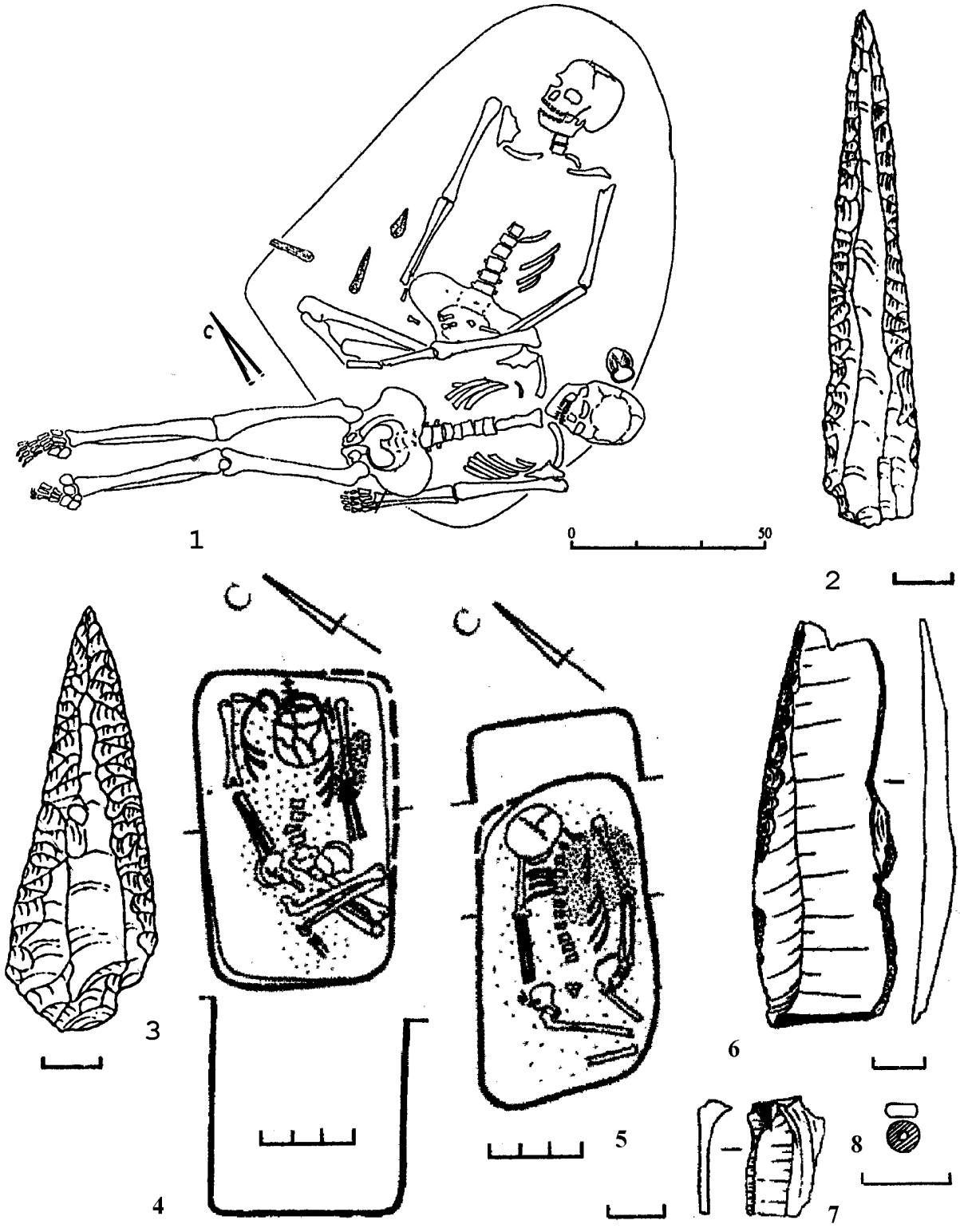


Fig. 55. Burials of the Sredniy Stog culture

1-3 - burial 2 (1986) from Igren cemetery; 4 - burial 3 from Bessergenovka; 5-8 - burial 4 from Bessergenovka (1-3 - after Телегин et al. 2001; 4-8 - after Нечитайло 2004). 8 - nacre.

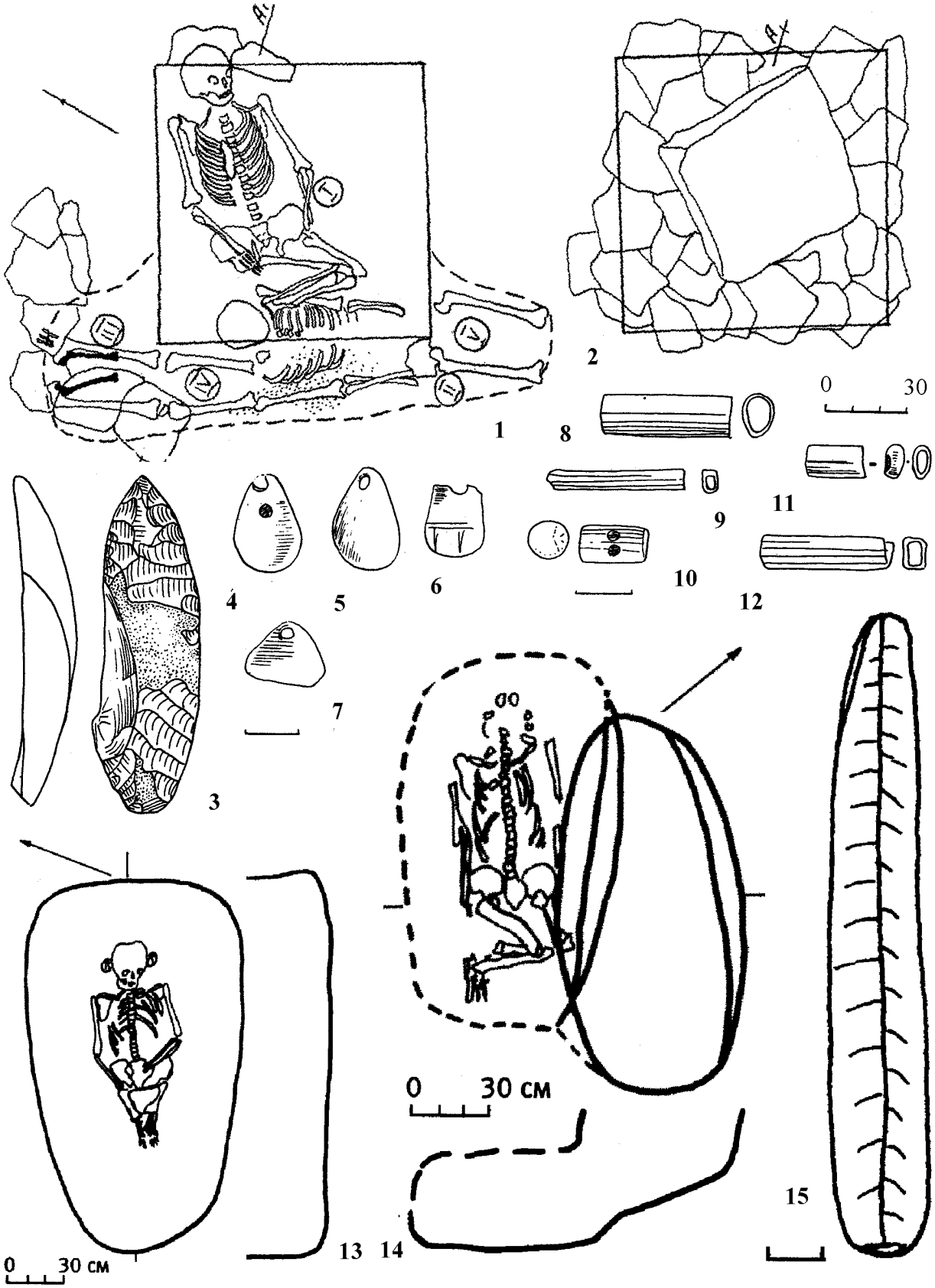


Fig. 56. Burials of the Sredniy Stog culture.

1-12 - Karataevo cemetery; 13 - Koisug II kurgan 5 burial 27;
14,15 - Koisug II kurgan 5 burial 33
(1-12 after Киящко 1994; 13-15 after Rassamakin 2004). 4-12 - bone.

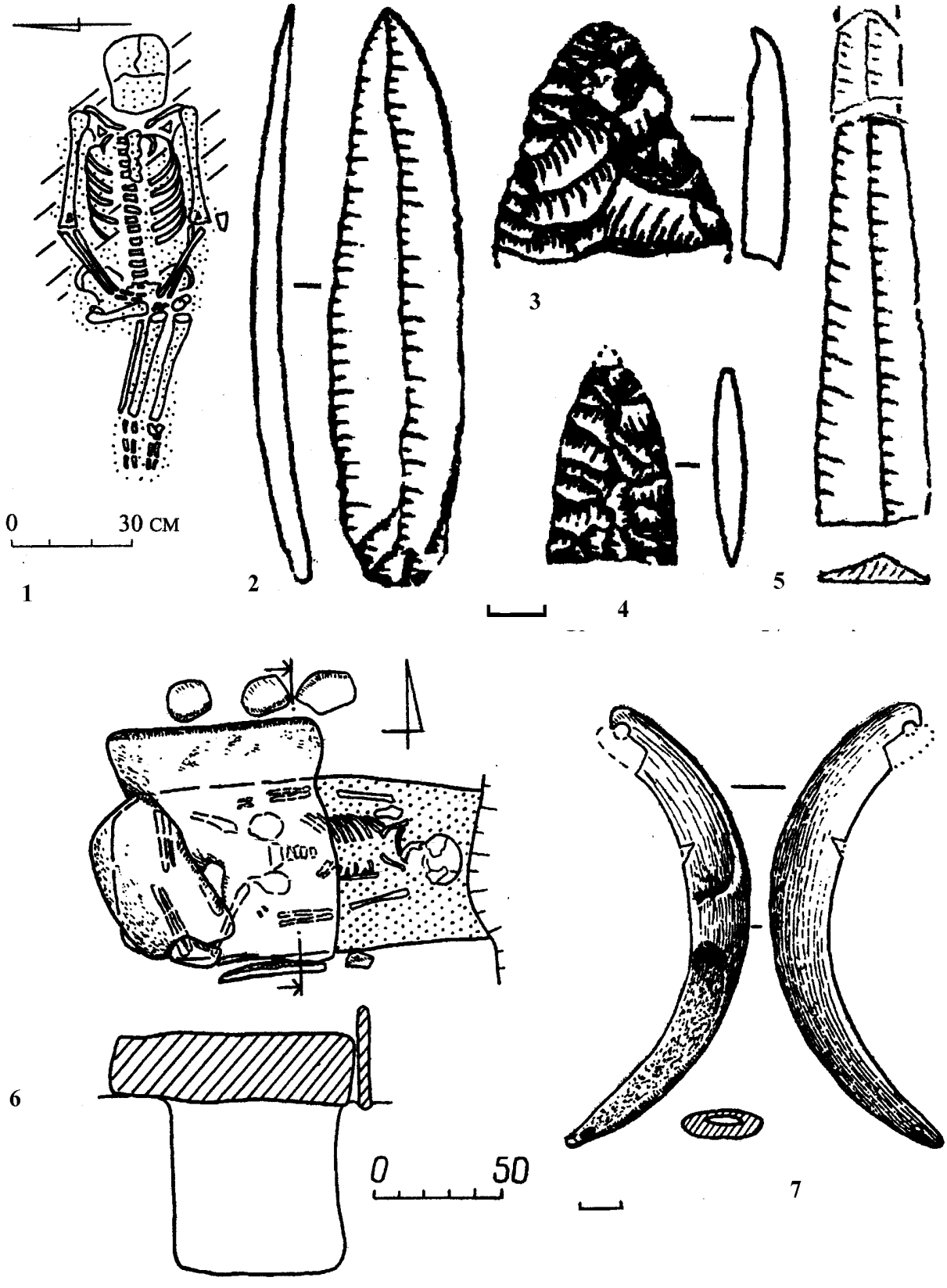


Fig. 57. Burials of the Sredniy Stog culture

1,2 - Krasnogorovka kurgan 5 burial 8; 4,5 - Krasnogorovka kurgan 5 burial 17; 6,7 - Liventsovka, burial 4 (1-5 after Нечитайло; 6,7 after Братченко, Шарафутдинова).

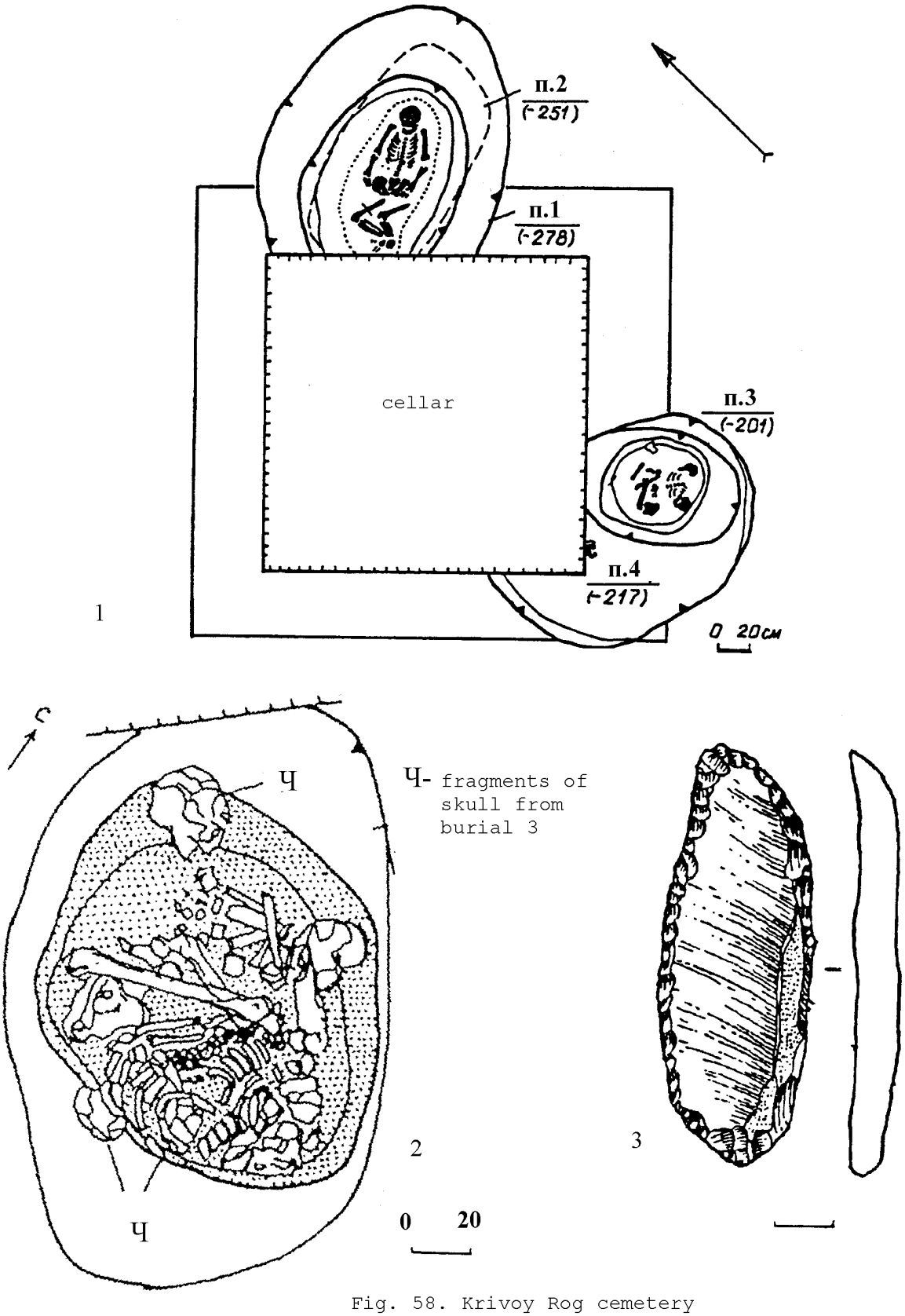


Fig. 58. Krivoy Rog cemetery

1 - plan of cemetery; 2,3 - burial 3 (after Рассамакін, Будников 1993).

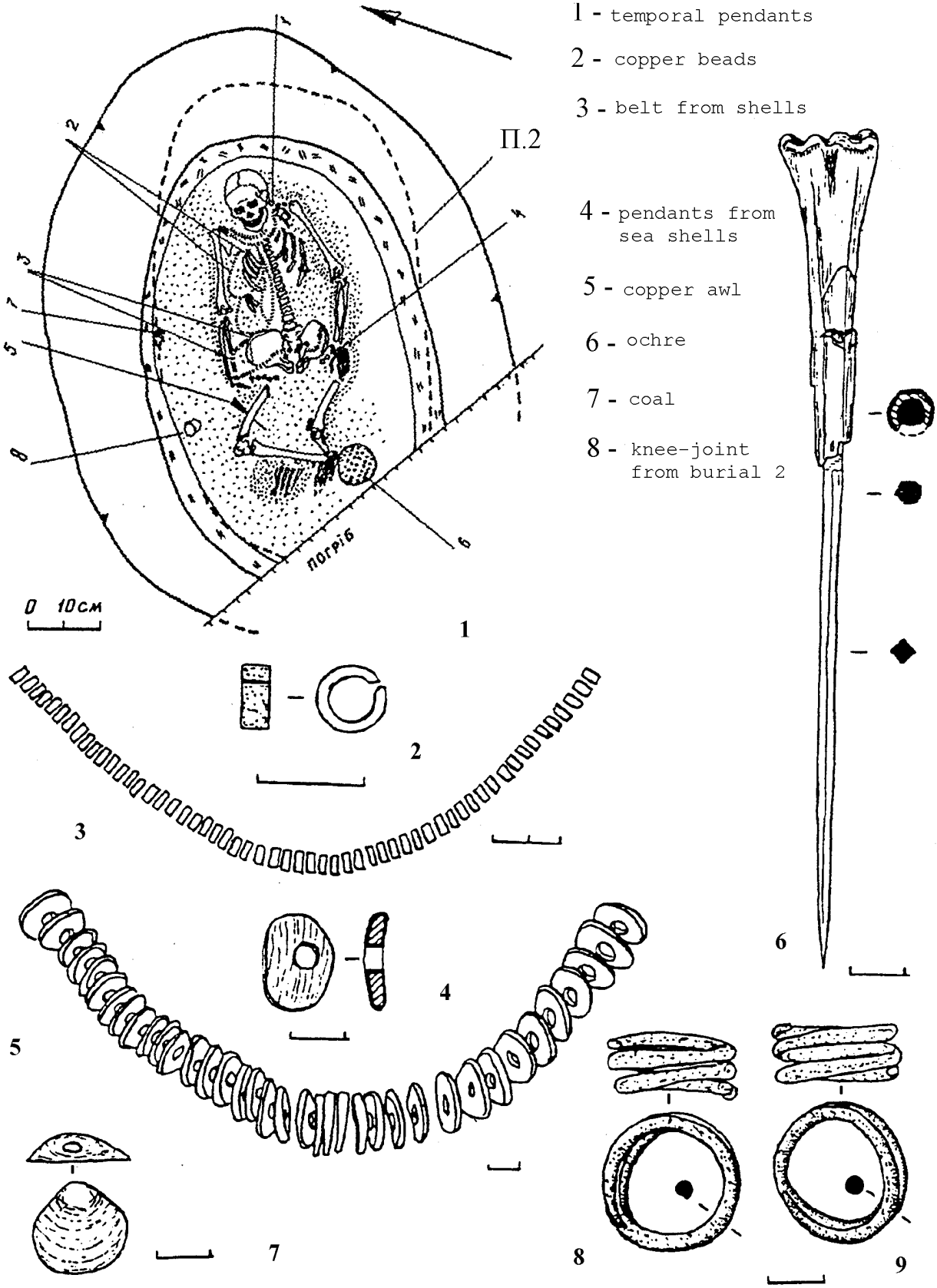


Fig. 59. Krivoy Rog cemetery, burial 1

(after Рассамкін, Будников 1993). 2,3,6,8,9 - copper; 4,5,7 - nacre.

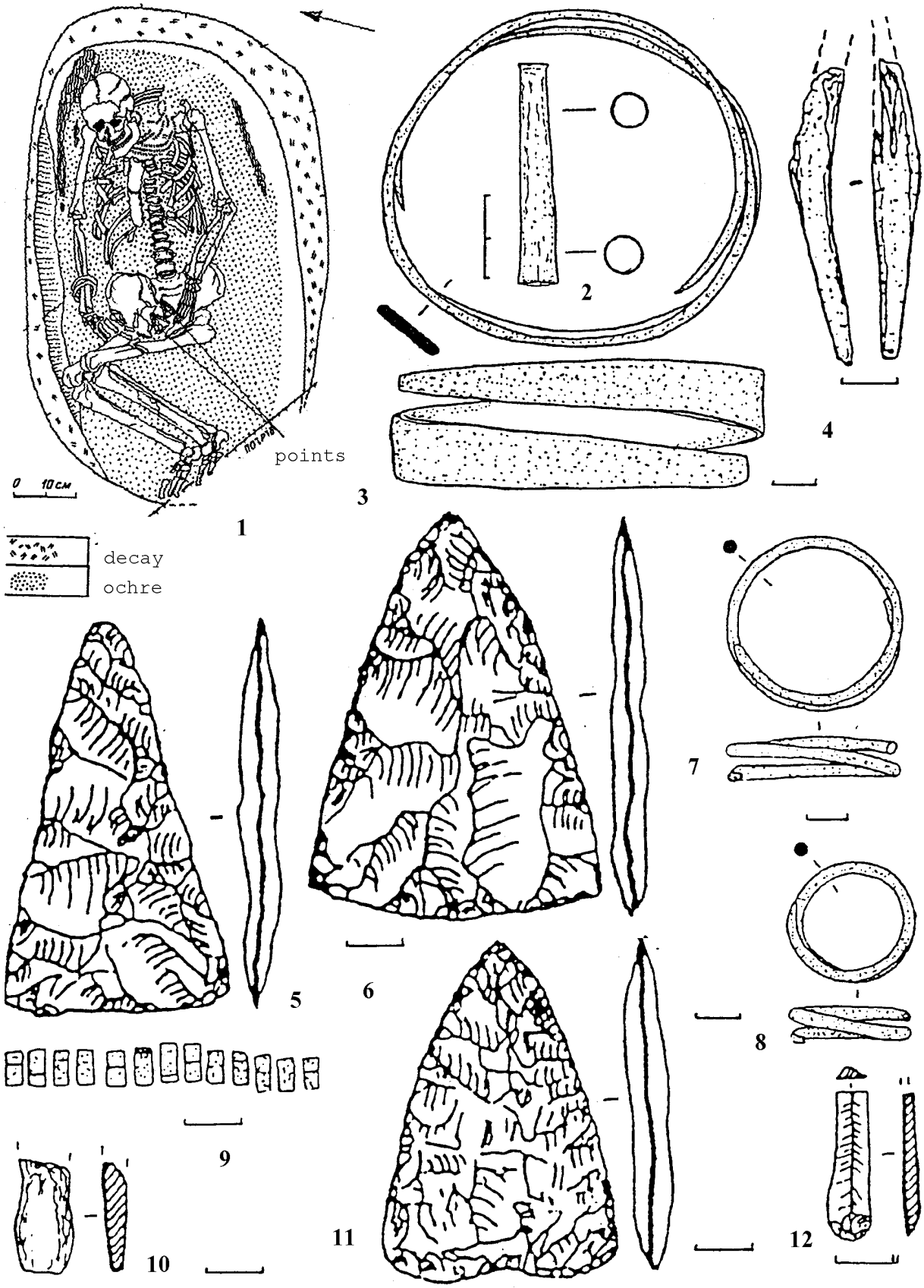


Fig. 60. Krivoy Rog cemetery, burial 2

(after Рассамакін, Будников 1993). 2 - gold; 5-8 - copper.

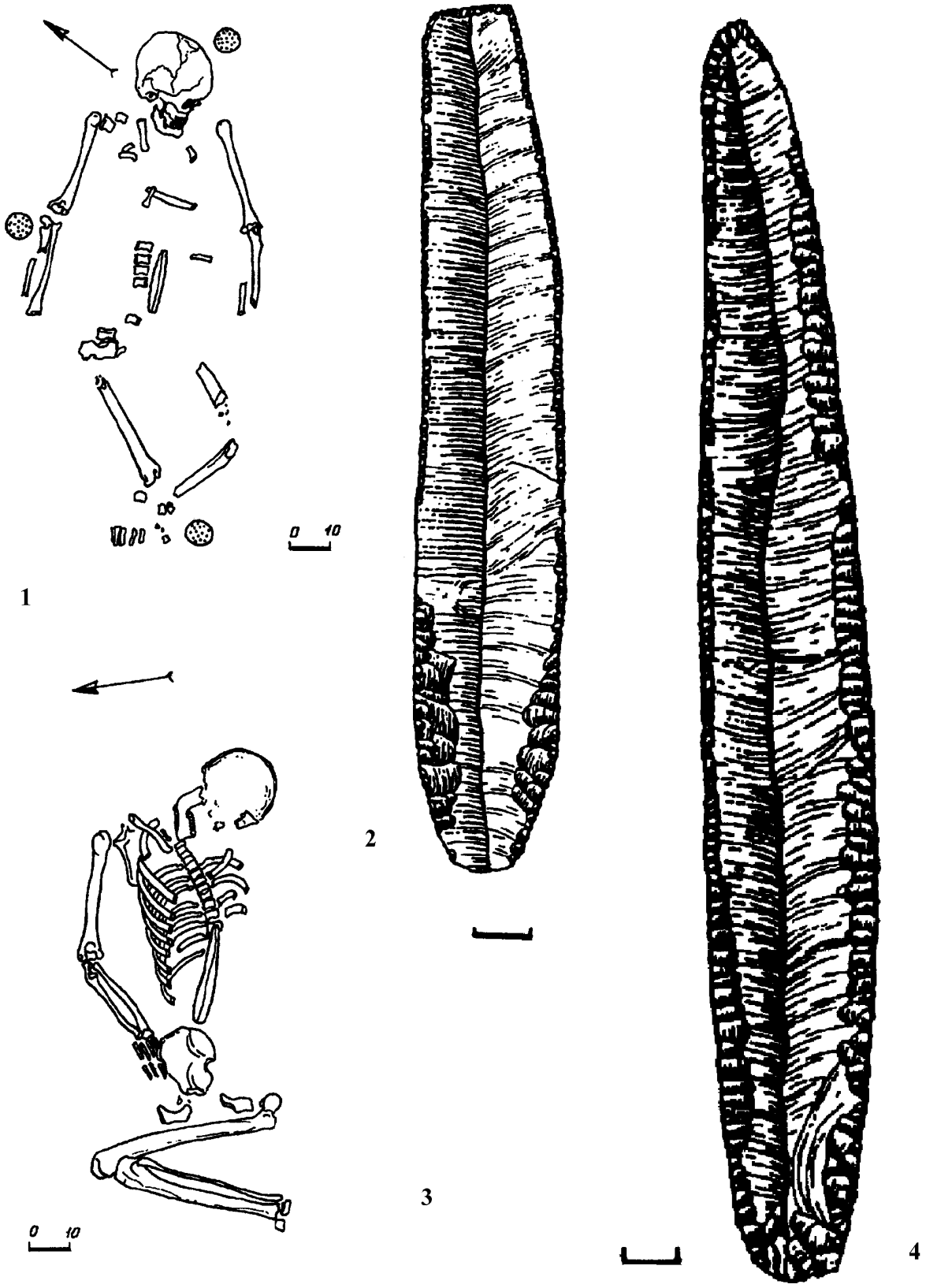


Fig. 61. Burials of the Sredniy Stog culture

1,2 - Nizhniy Rogachik; 3,4 - Kut, burial 7 kurgan 8 (after Рассамакін, Будников 1993).

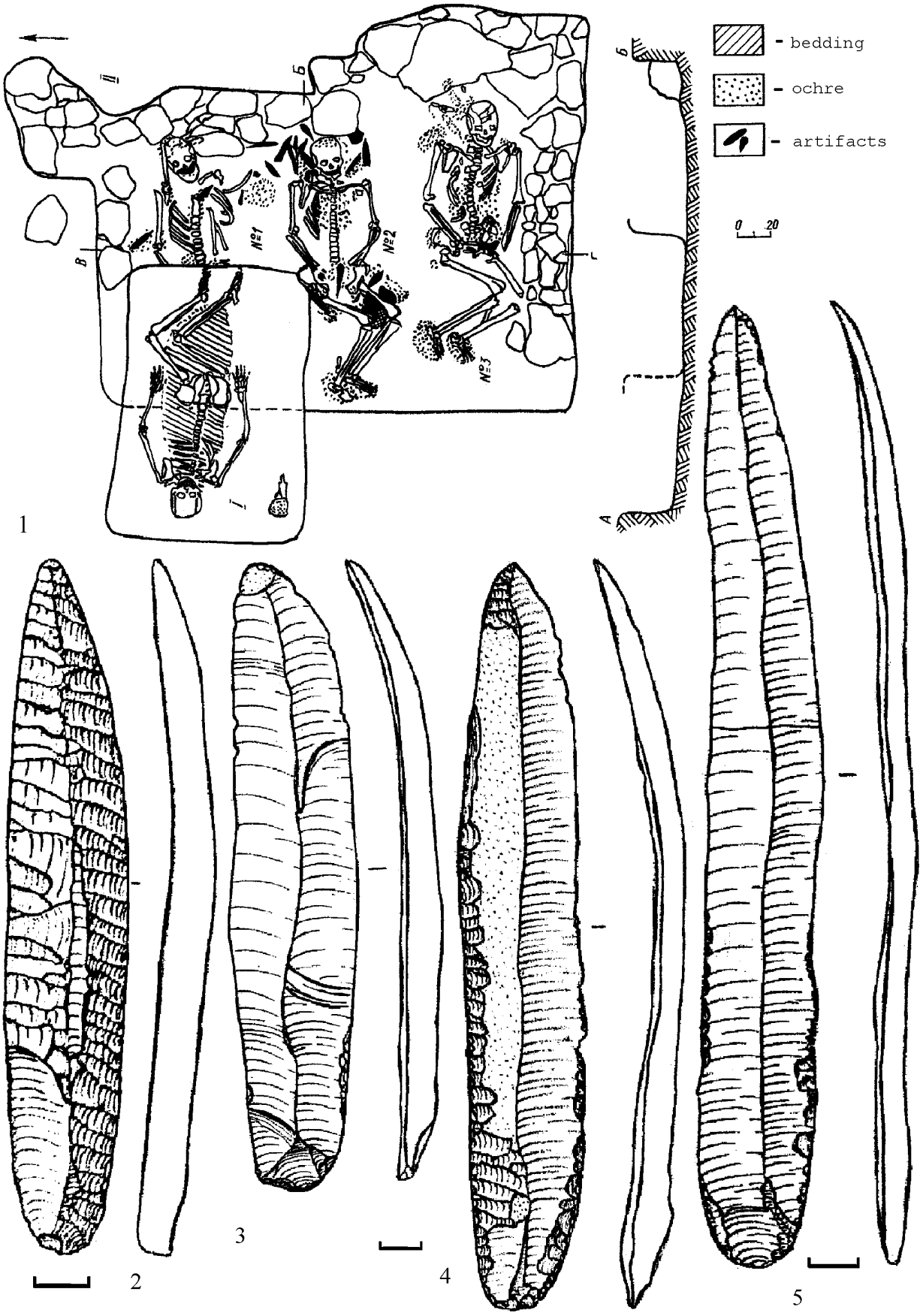


Fig. 62. Burial 2 kurgan 1 from Lugansk (after Писларий et al. 1976).

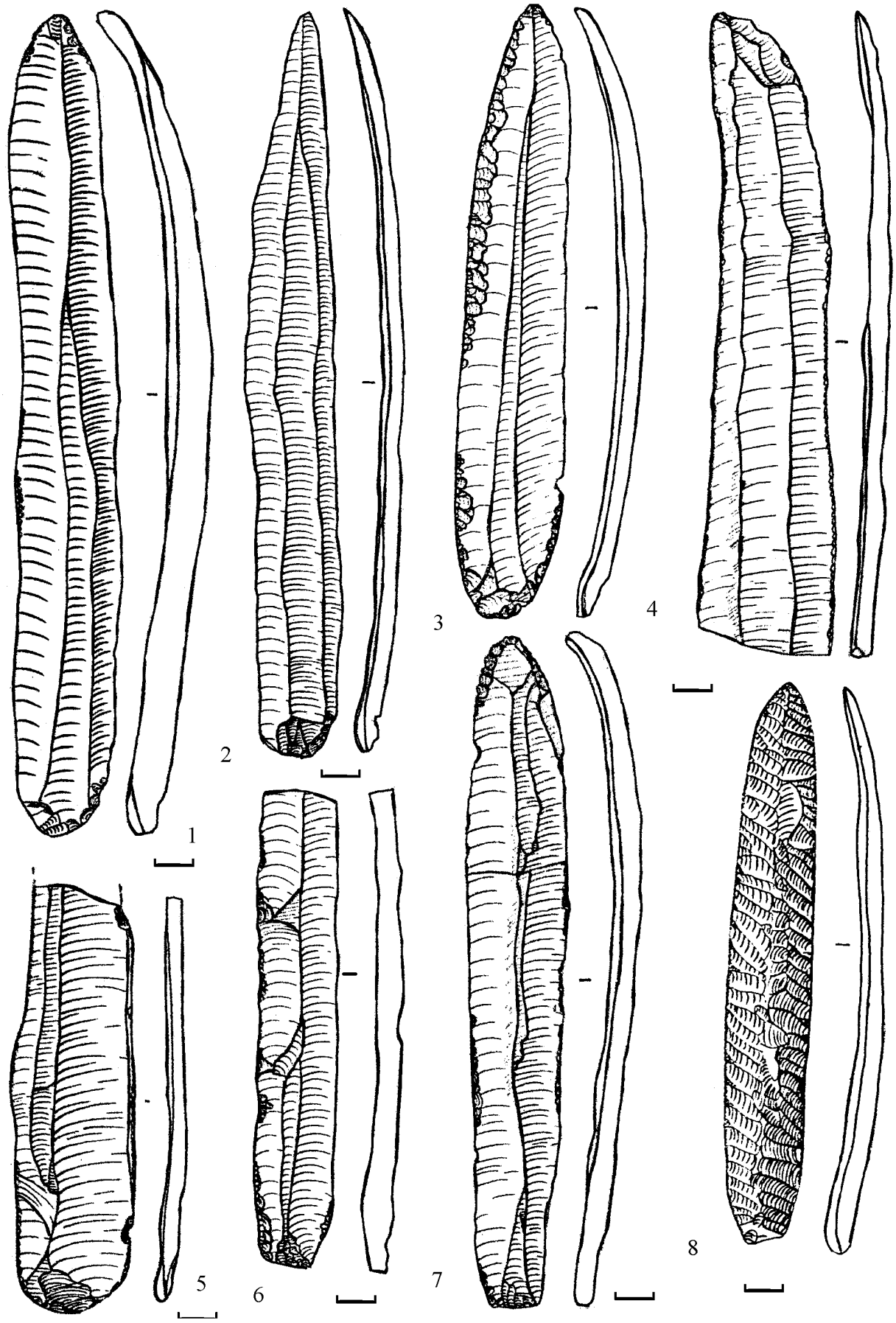


Fig. 63. Grave goods of burial 2 in kurgan 1 from Lugansk (after Писларий et al. 1976)

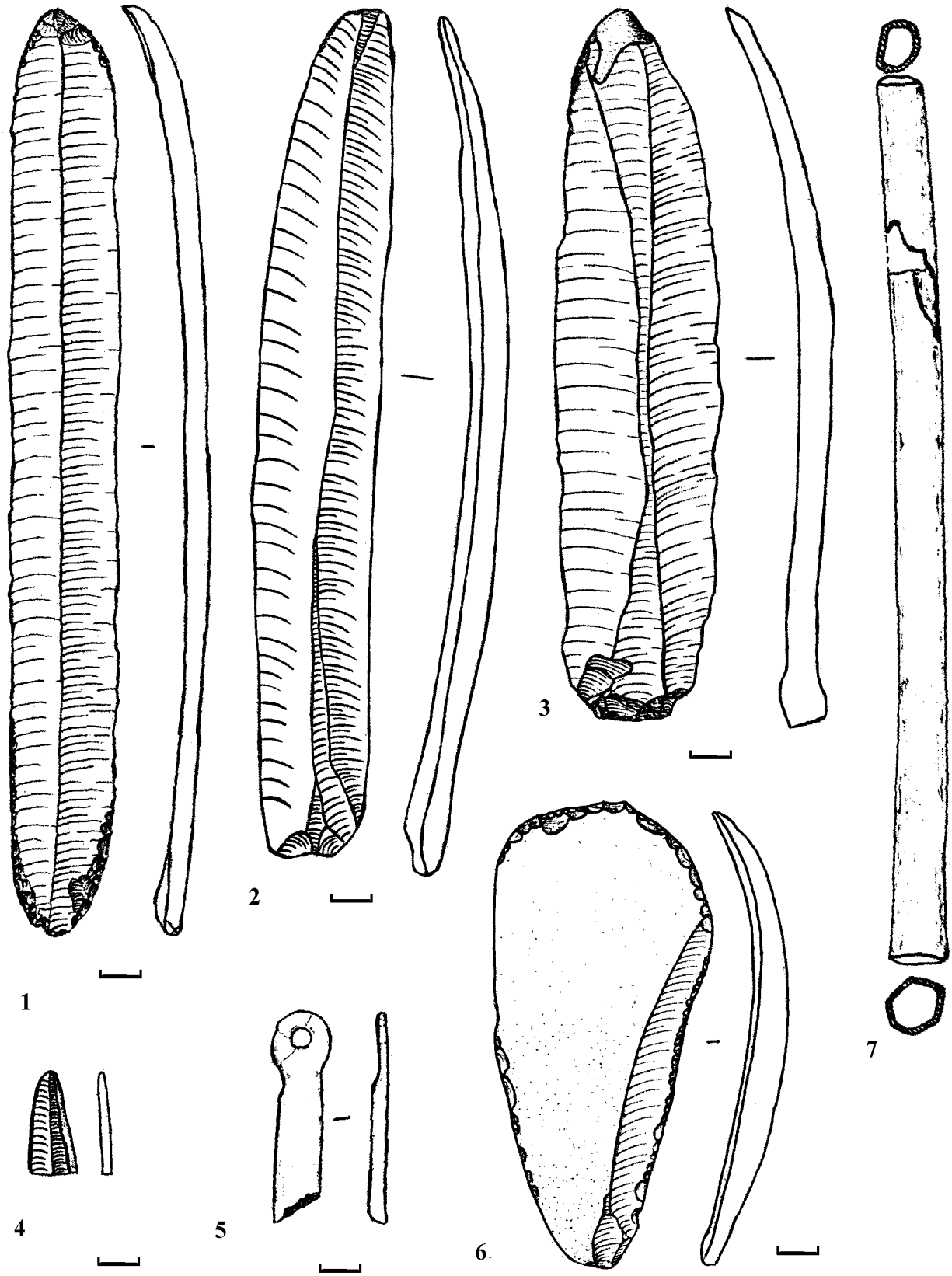


Fig. 64. Grave goods of burial 2 in kurgan 1 from Lugansk (after Писларий et al. 1976). 5-7 - bone.

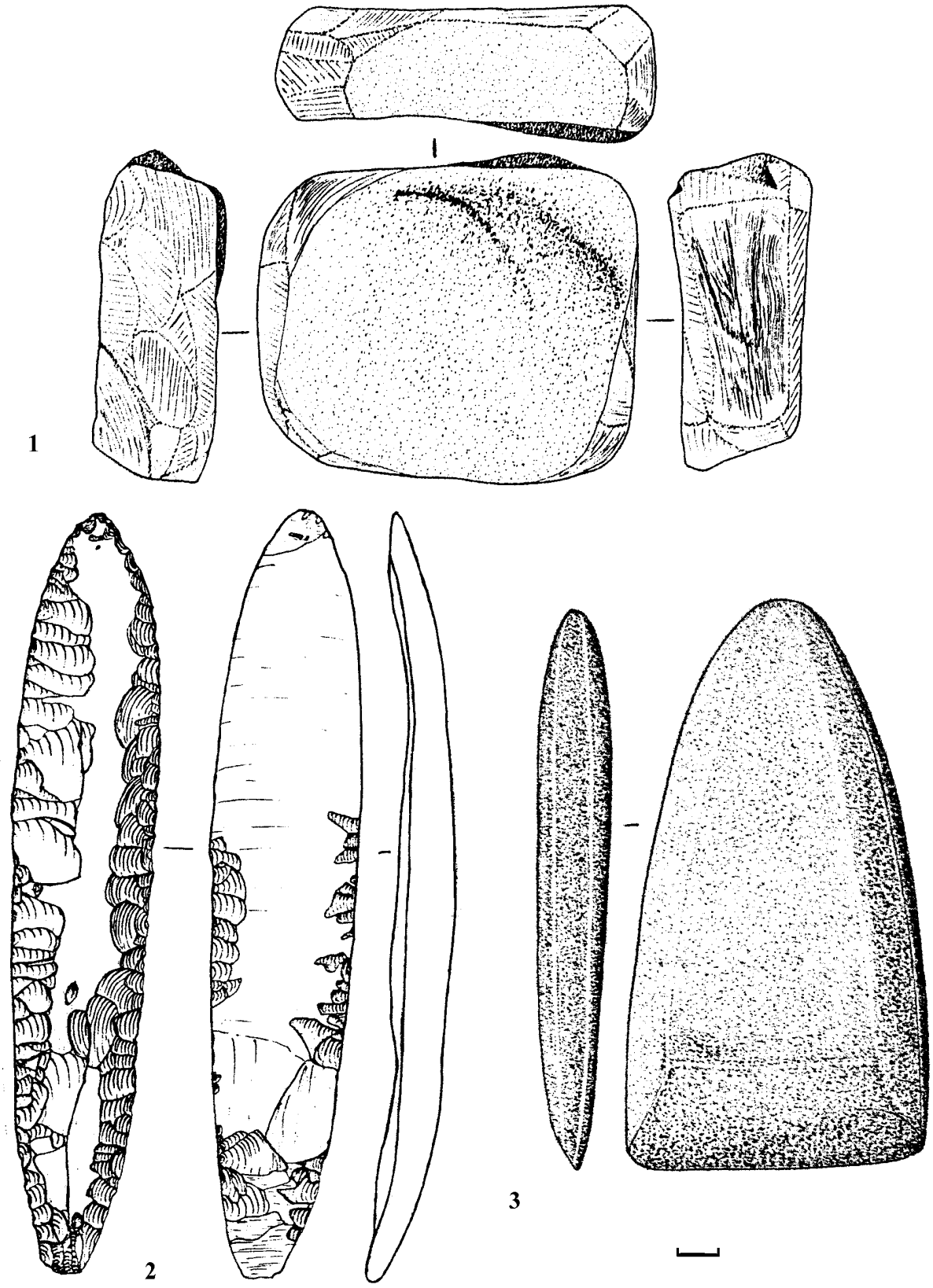


Fig. 65. Grave goods of burial 2 in kurgan 1 from Lugansk (after Писларий et al. 1976).

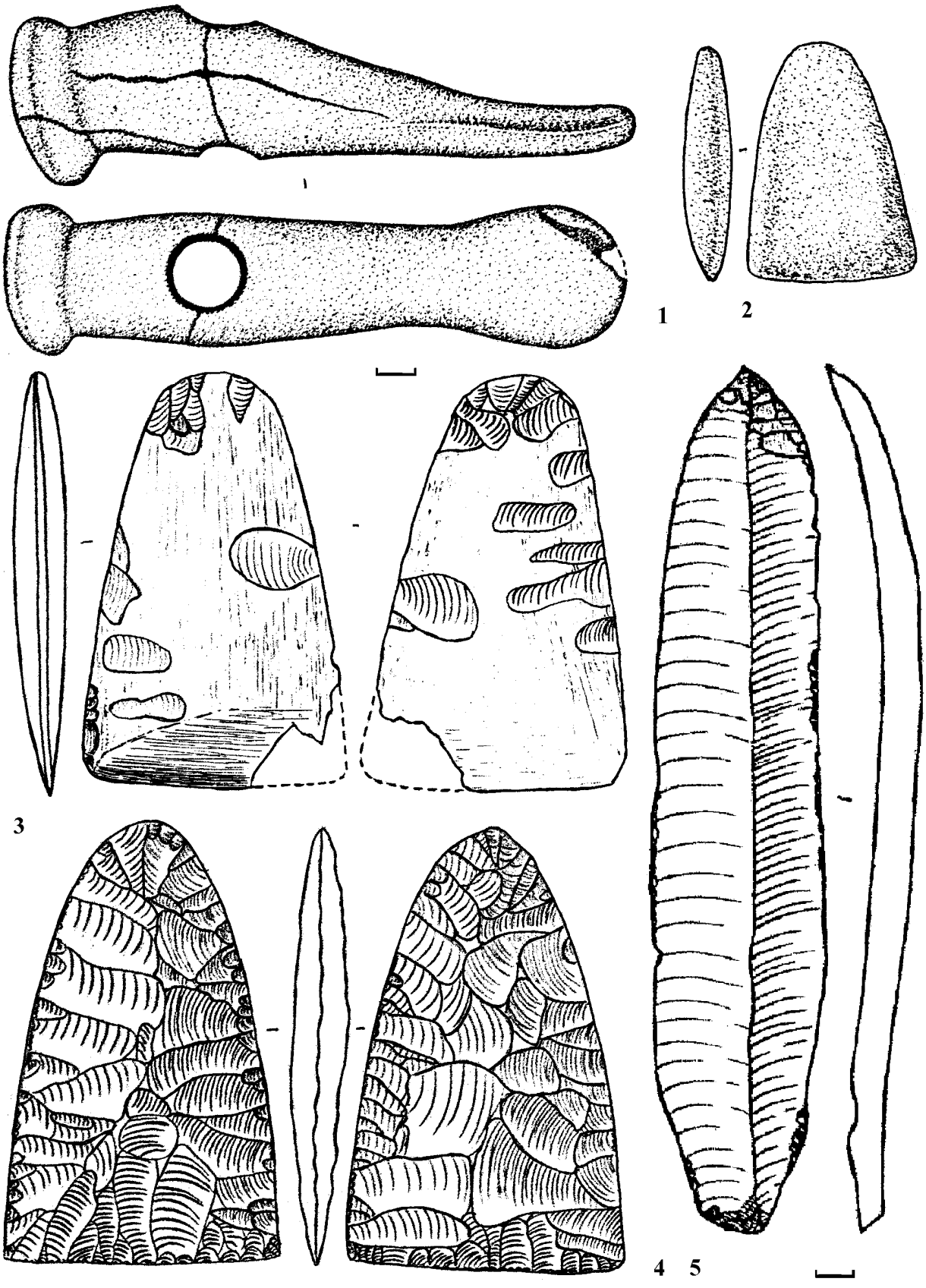


Fig. 66. Grave goods of burial 2 in kurgan 1 from Lugansk (after Писларий et al. 1976).

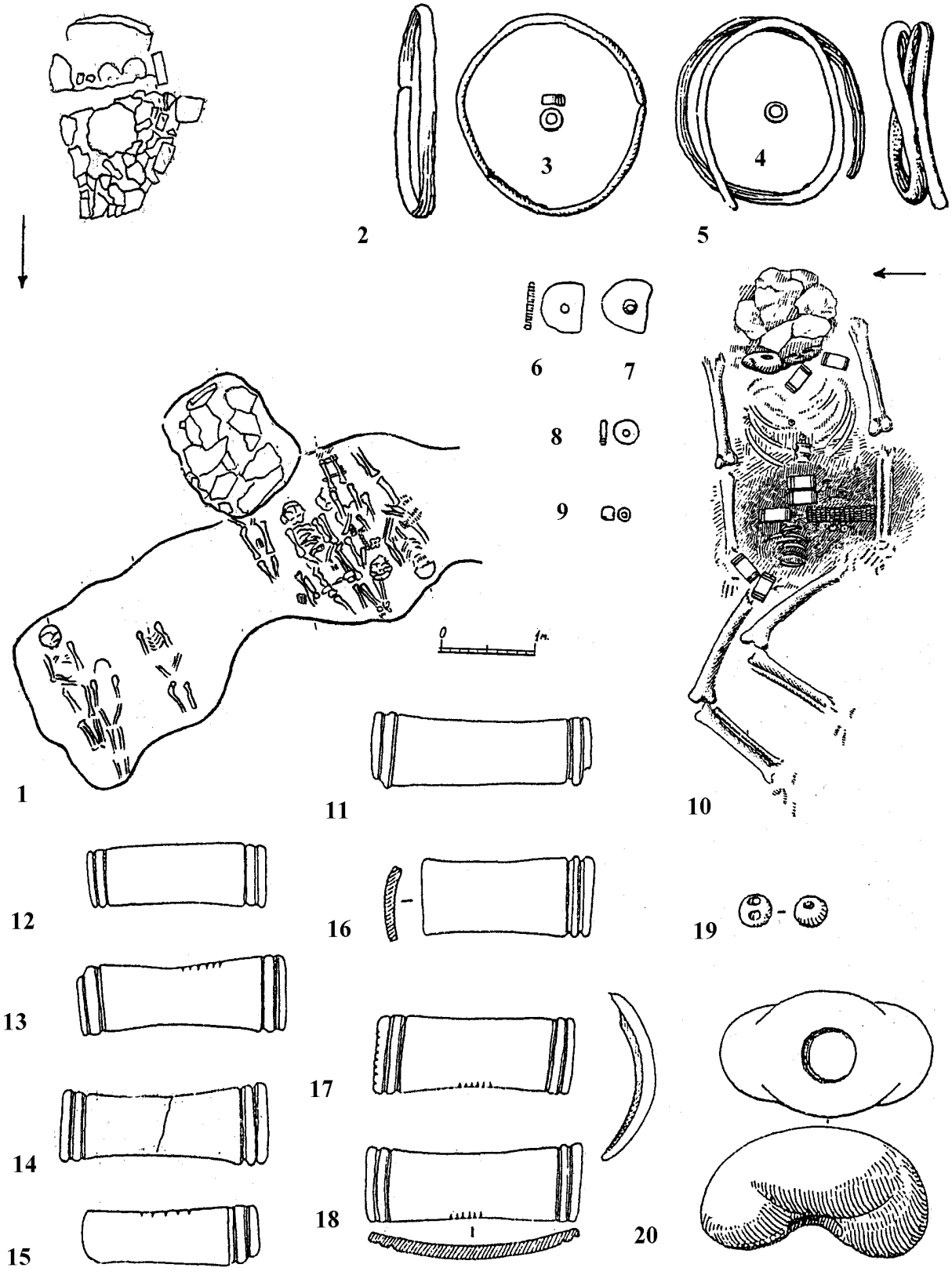


Fig. 67. Mariupol cemetery

1 - plan of the Eneolithic burials location; 2-5 - burials with bracelets; 6-20 - burial XXIV (after Макаренко 1933).
2-5,9 - copper; 6-8 - nacre; 11-19 - bone.

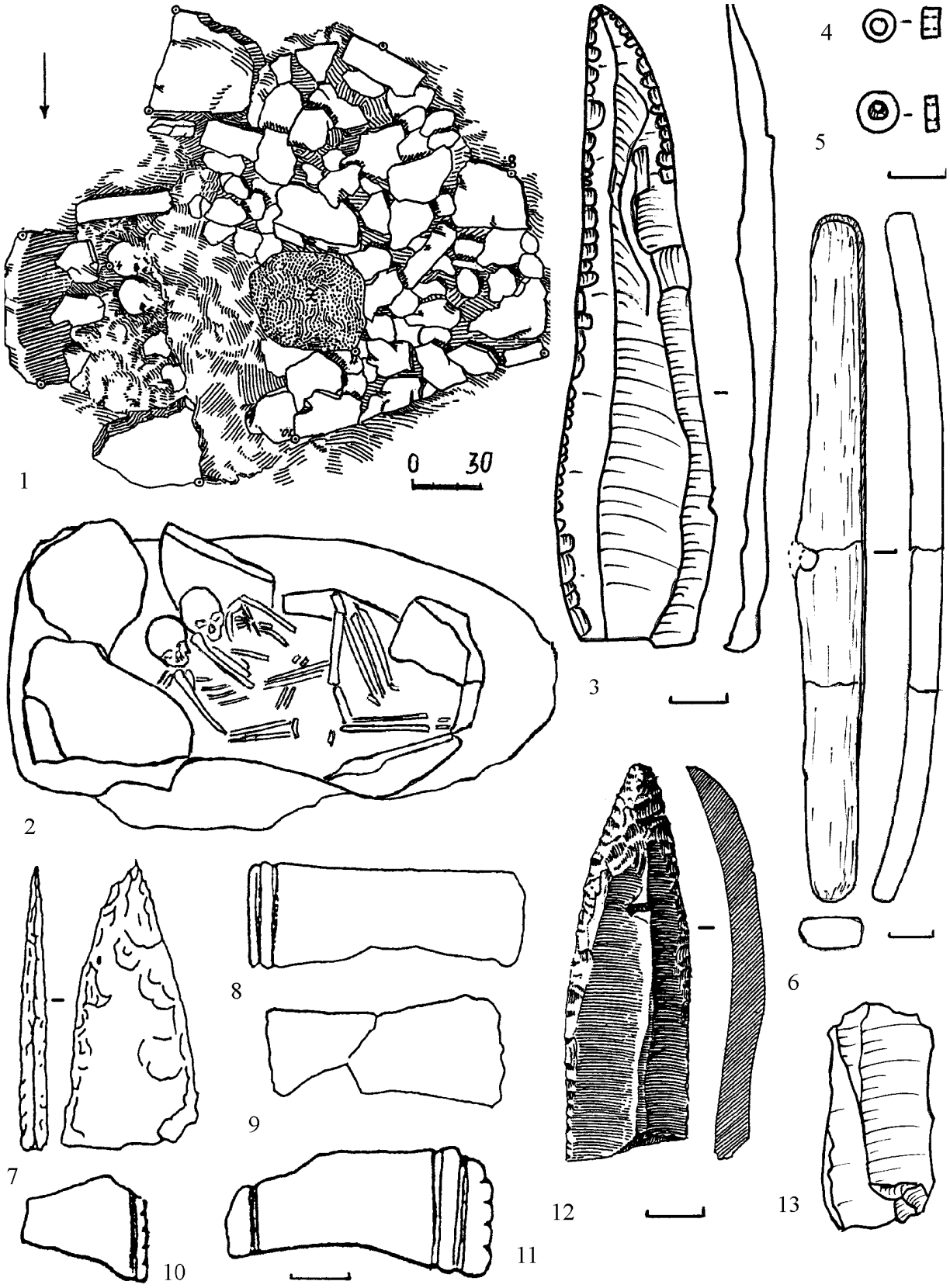


Fig. 68. Mariupol cemetery

1,2 - plan of cremation and burial XXI location; 3-6 - grave goods of burial XXI; 7-13 - grave goods of cremation.
(1,2,4,5,7-12 - after Макаренко 1933); 4 - copper; 5 - nacre; 6,8-10 - bone

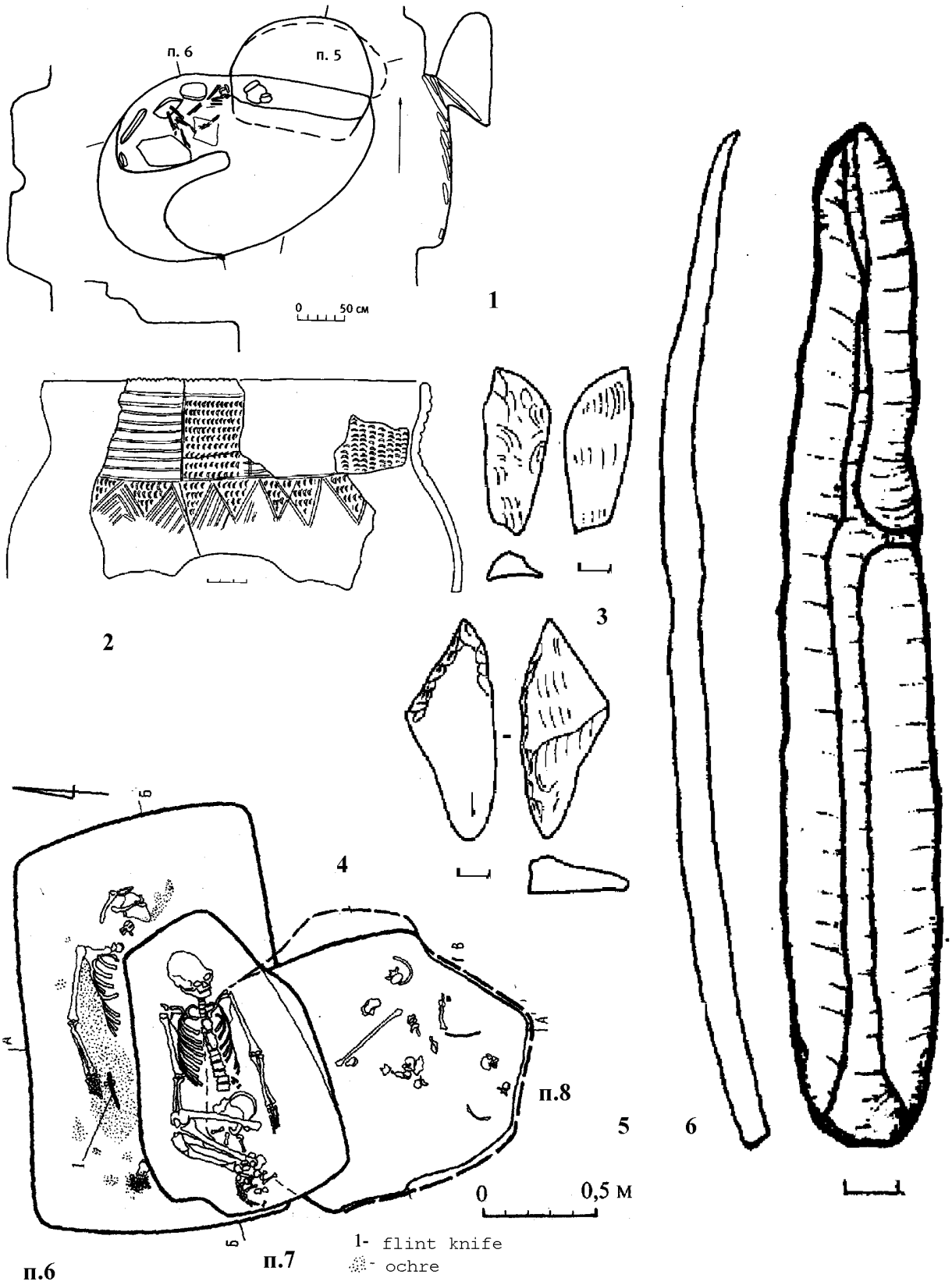


Fig. 69. Burials of the Sredniy Stog culture

1-4 - Mokry Chaltyr, kurgan 2 burial 5; 5,6 - Moskva, burial 6
(1-4 - after Rassamakin 2004; 5,6 - after Жеребилов 1998).

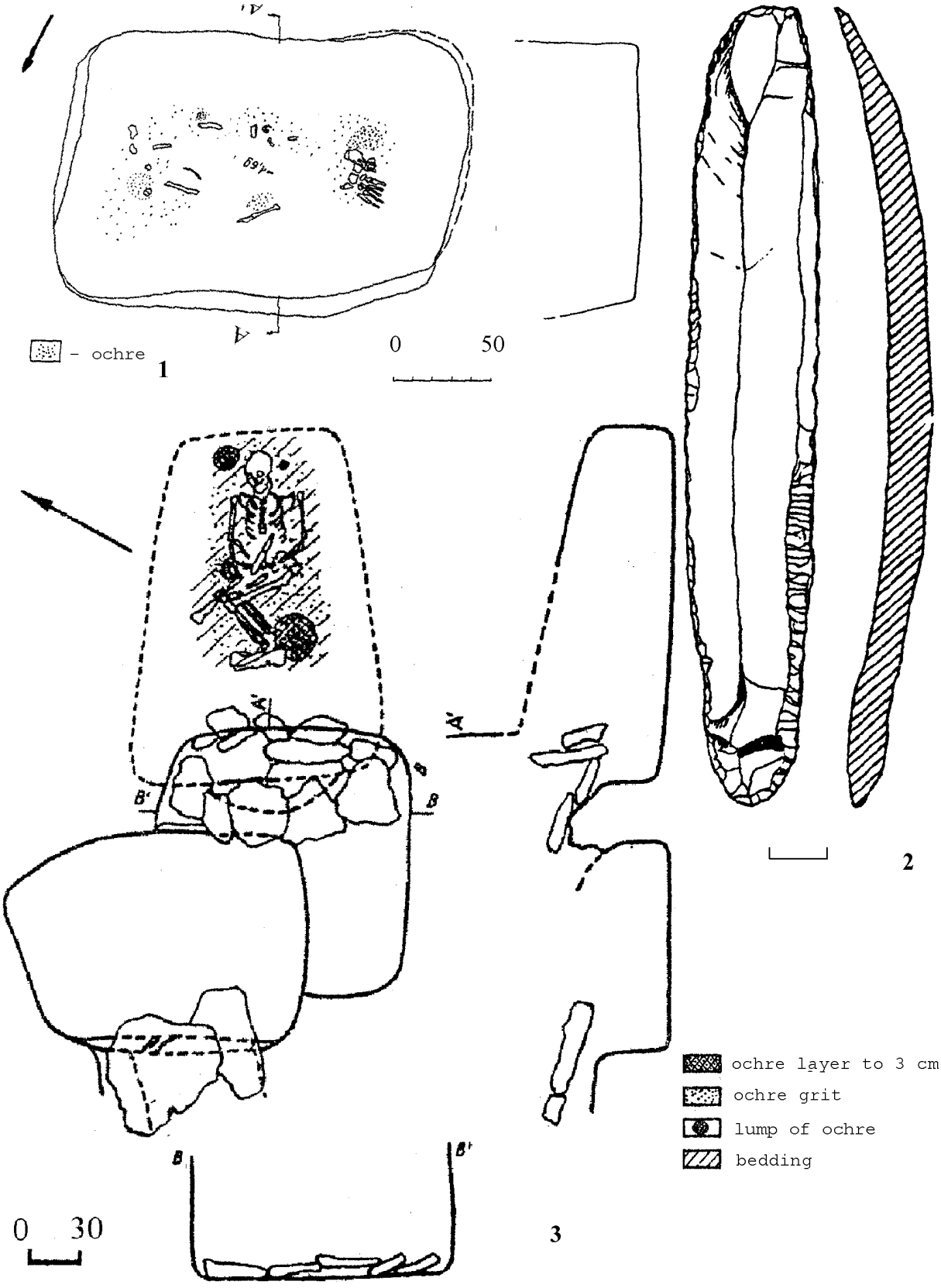


Fig. 70. Burials of the Sredniy Stog culture

1,2 - Mukhin 1, kurgan 3 burial 6; 3 - Mukhin 2, kurgan 5 burial 9 (1,2 - after Власкин 2002; 3 - after Нечитайло et al. 1998).

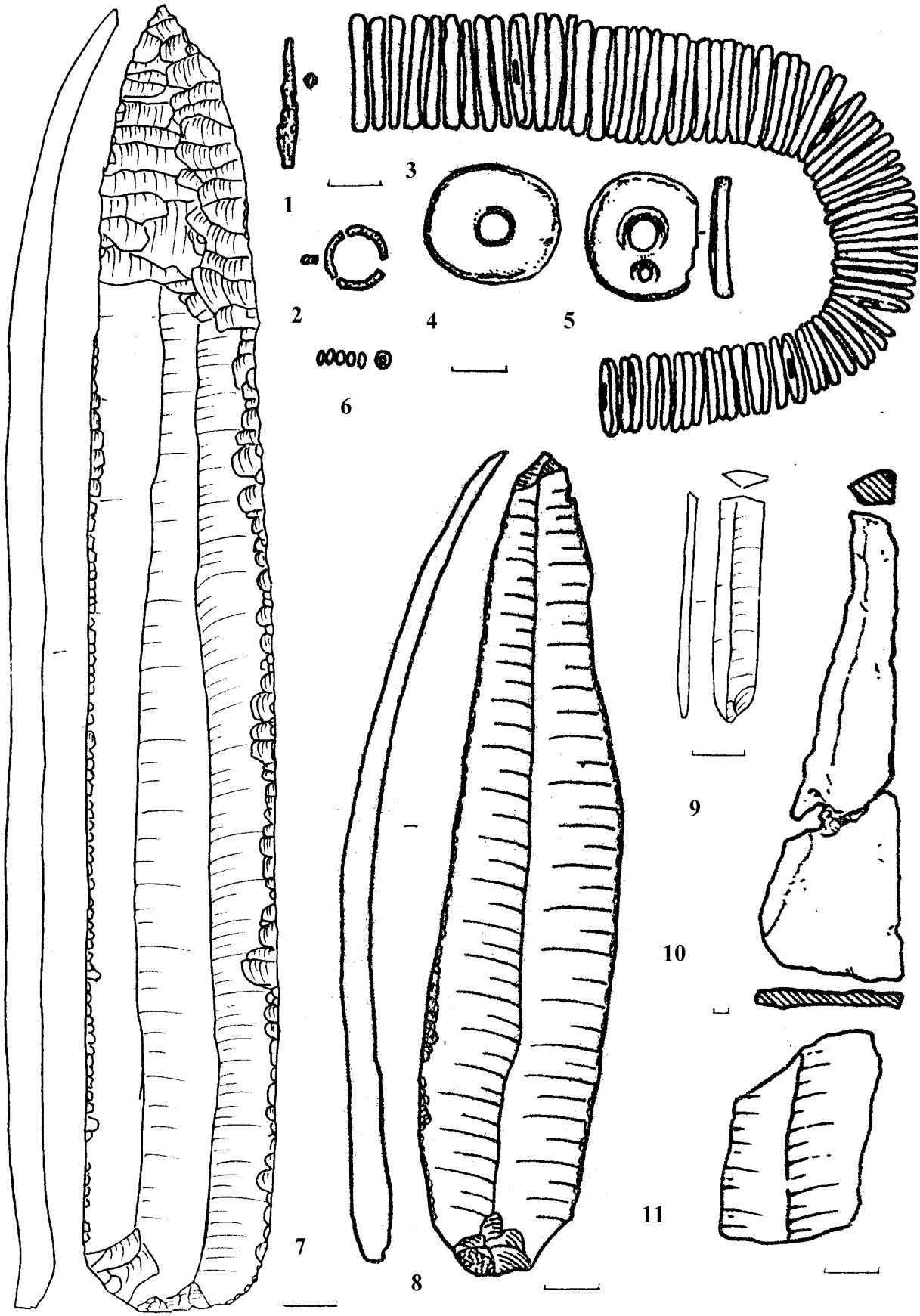


Fig. 71. Grave goods of burial 9 in kurgan 5 from Mukhin 2 (after Нечитайло et al. 1998). 1,2,6 - copper; 3-5 - nacre; 10 - bone.

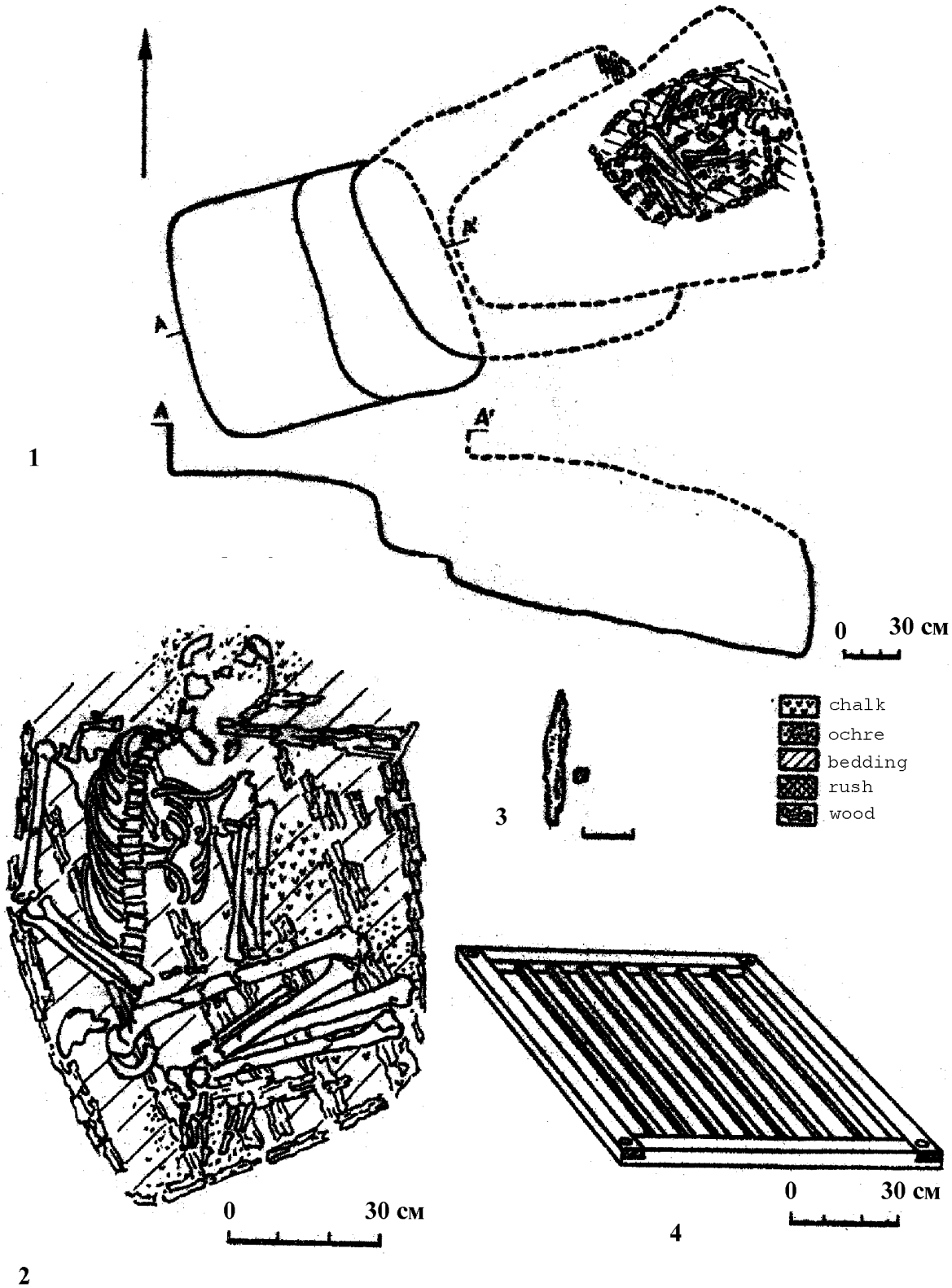


Fig. 72. Mukhin 2, kurgan 5 burial 30
(after Нечитайло et al. 1998). 3 - copper.

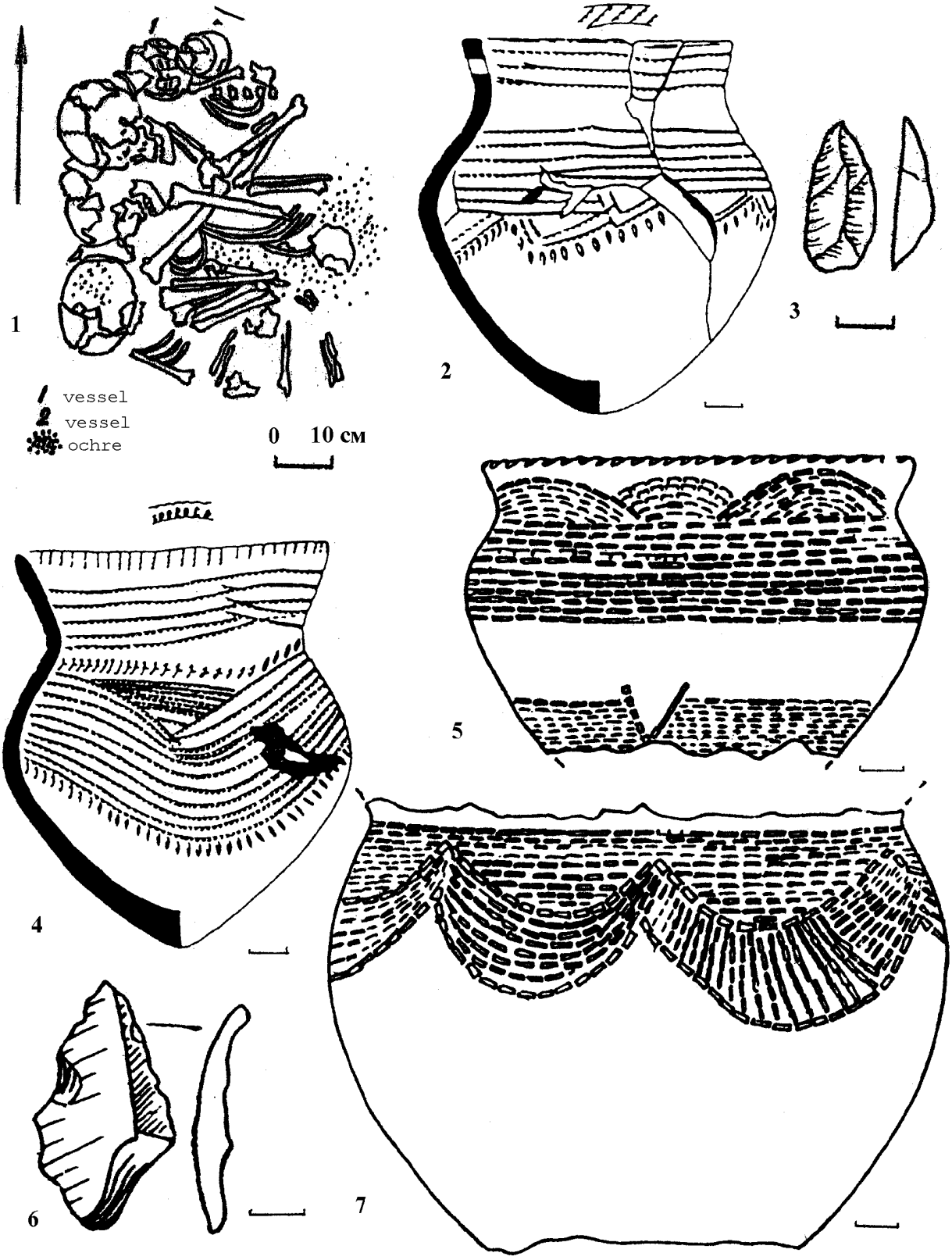


Fig. 73. Burials of the Sredniy Stog culture

1-4 - burial 7 in kurgan 5 from Mukhin 2; 5-7 - grave goods of burial from Semenkin (1-4 - after Нечитайло et al. 1998; 5-7 - after Кияшко 1994).

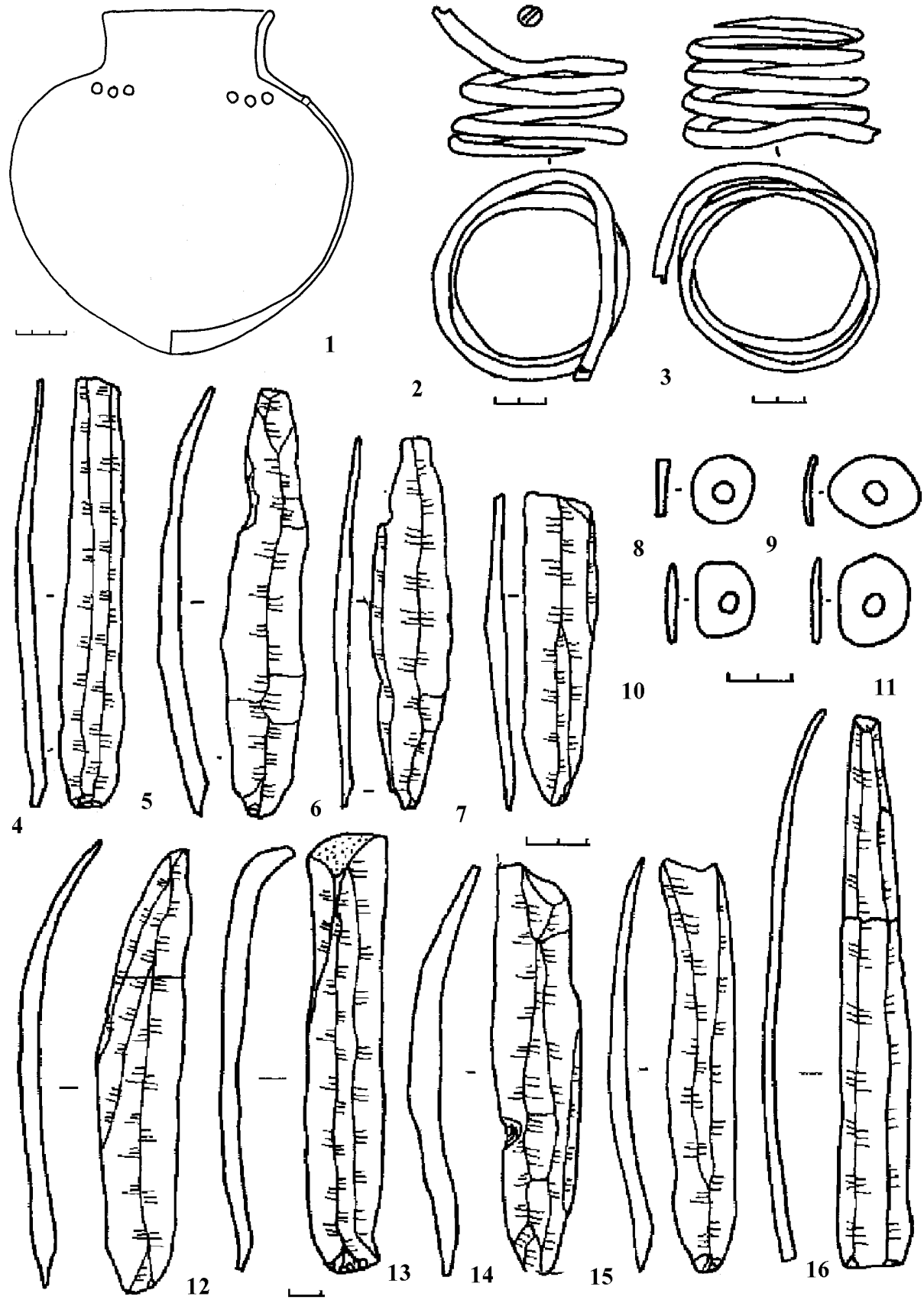


Fig. 74. Grave goods from Novodanilovka cemetery (after Rassamakin 2004). 2,3 - copper; 8-11 - nacre.

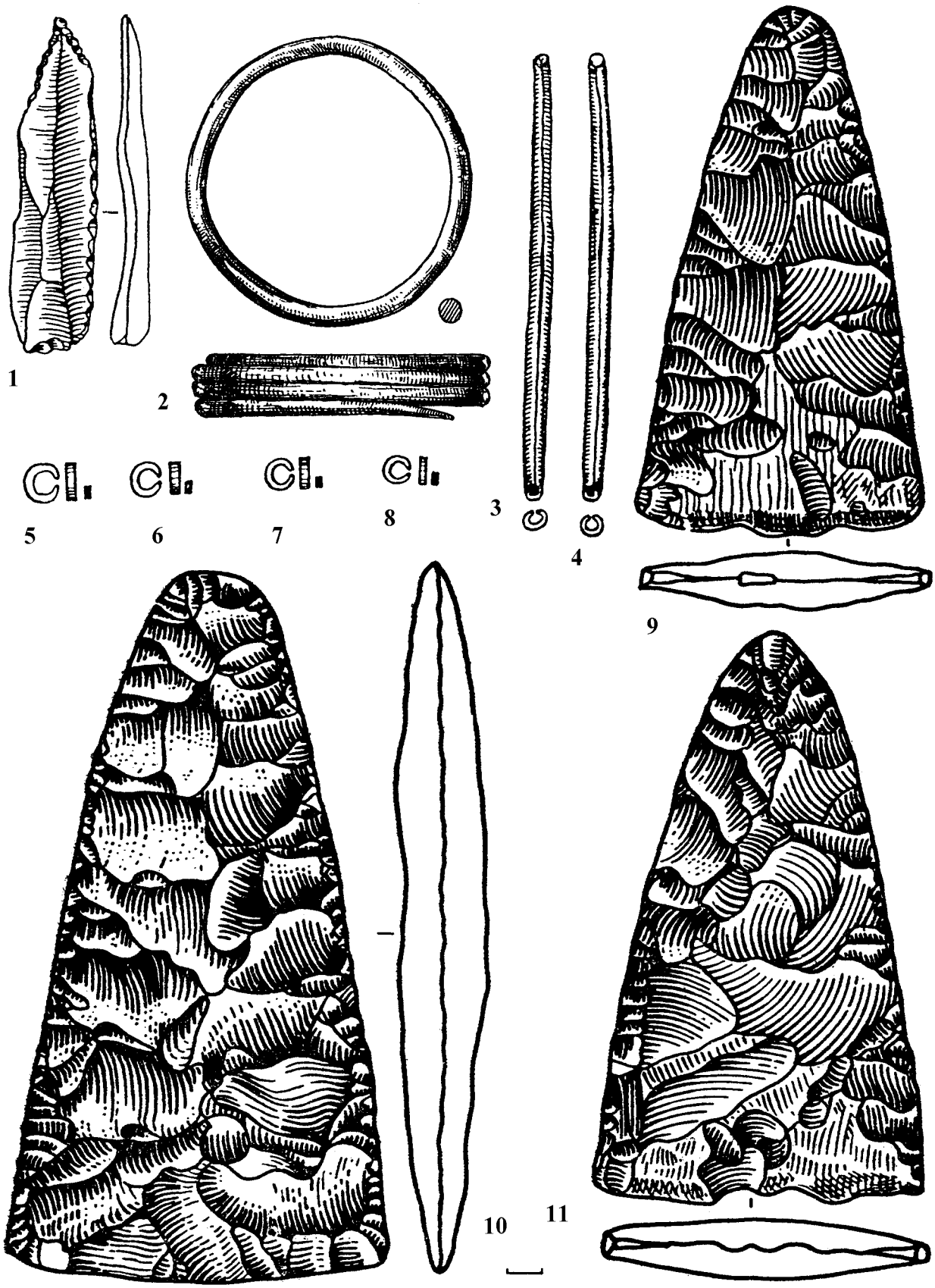


Fig. 75. Grave goods of burial 1 from Petro-Svistunovo cemetery (after Бодянский 1968). 2-8 - copper.

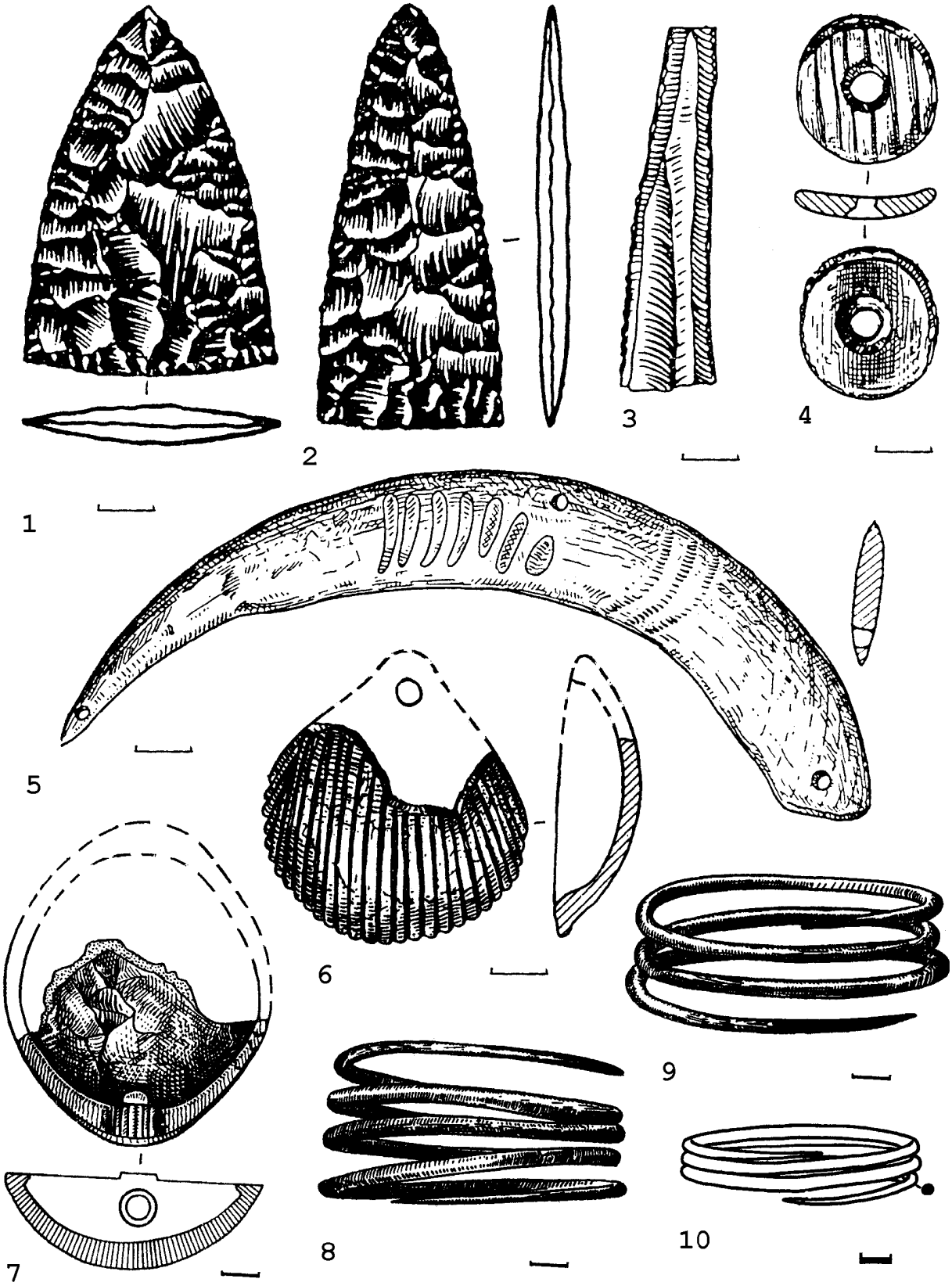


Fig. 76. Petro-Svistunovo cemetery

1-5 - grave goods of burial 2; 6-10 - grave goods of ruined burials (after Бодянский 1968). 4,6 - nacre, 5 - boar fang; 7 - alabaster; 8,9 - copper.

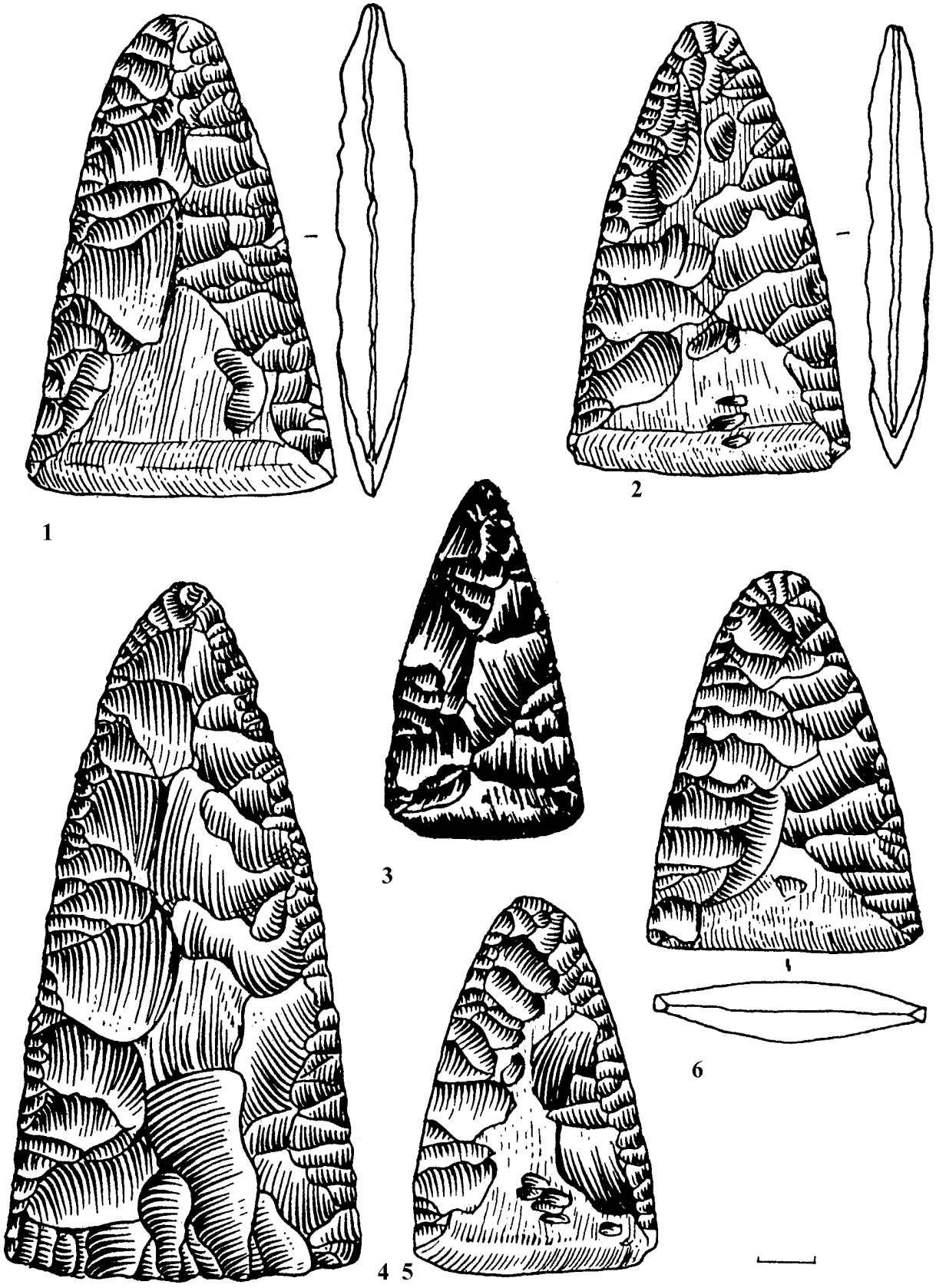


Fig. 77. Grave goods of ruined burials from Petro-Svistunovo (after Бодянский 1968).

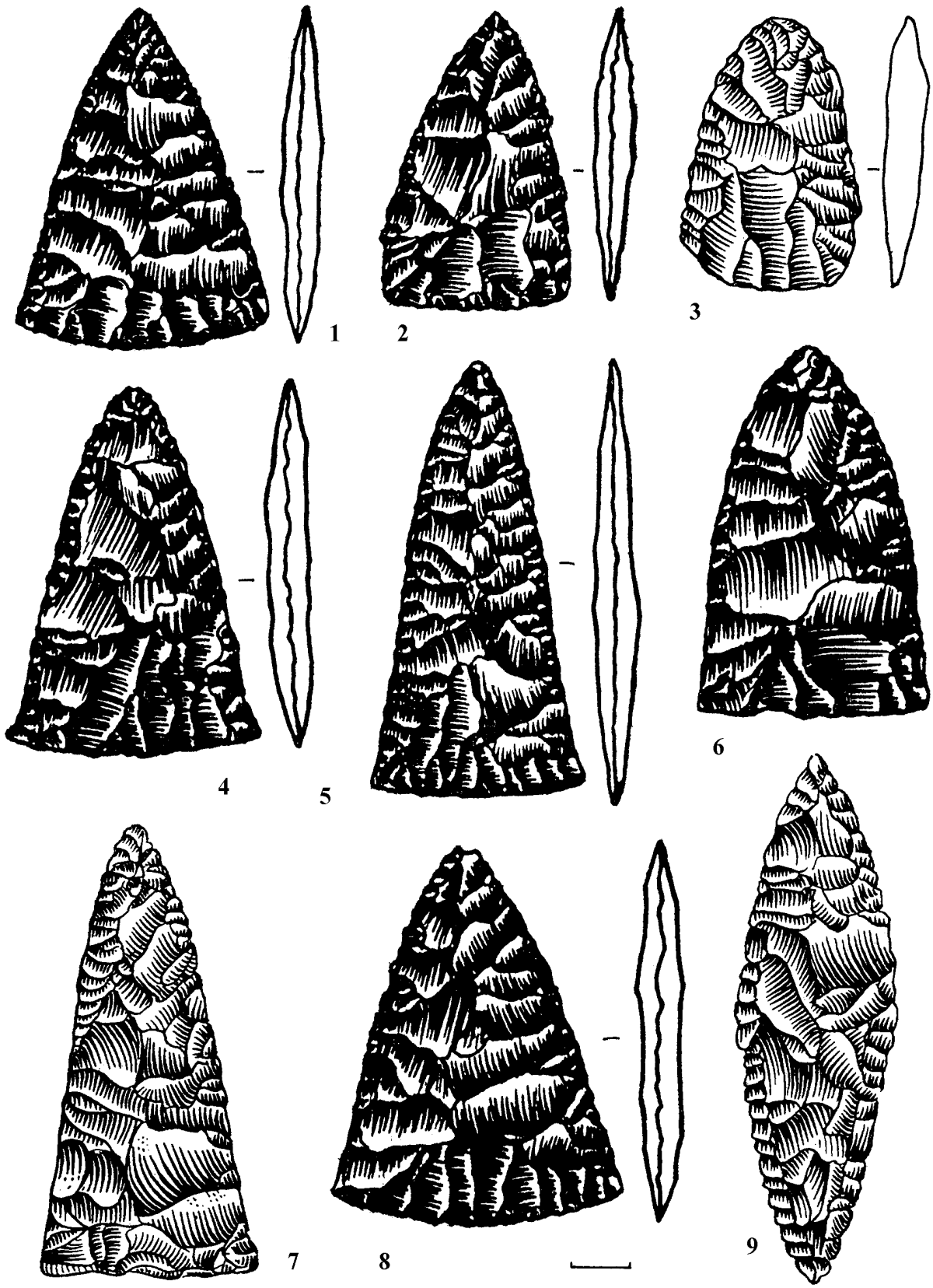


Fig. 78. Grave goods of ruined burials from Petro-Svistunovo (after Бодянский 1968).

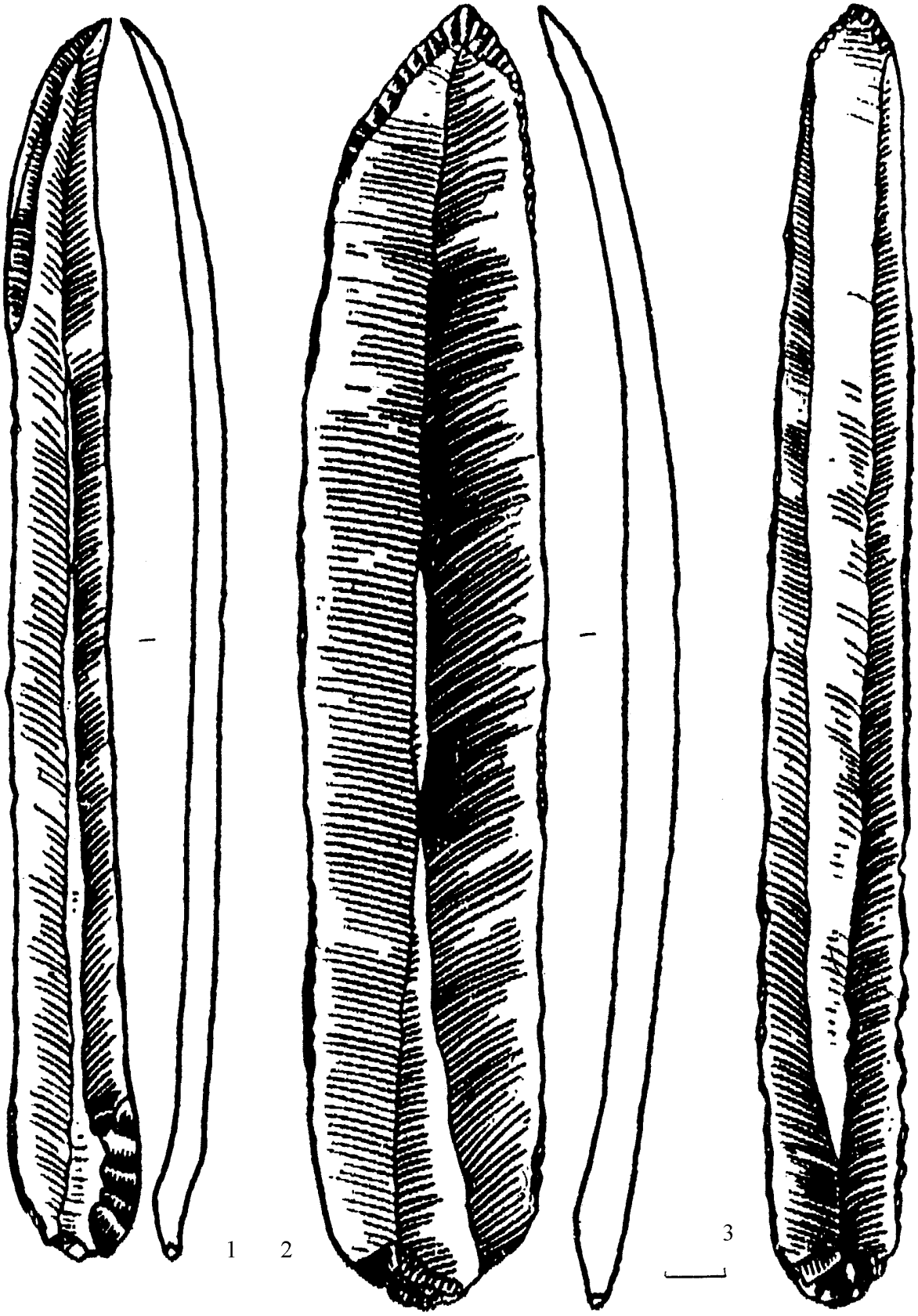


Fig. 79. Grave goods of ruined burials from Petro-Svistunovo (after Бодянский 1968).

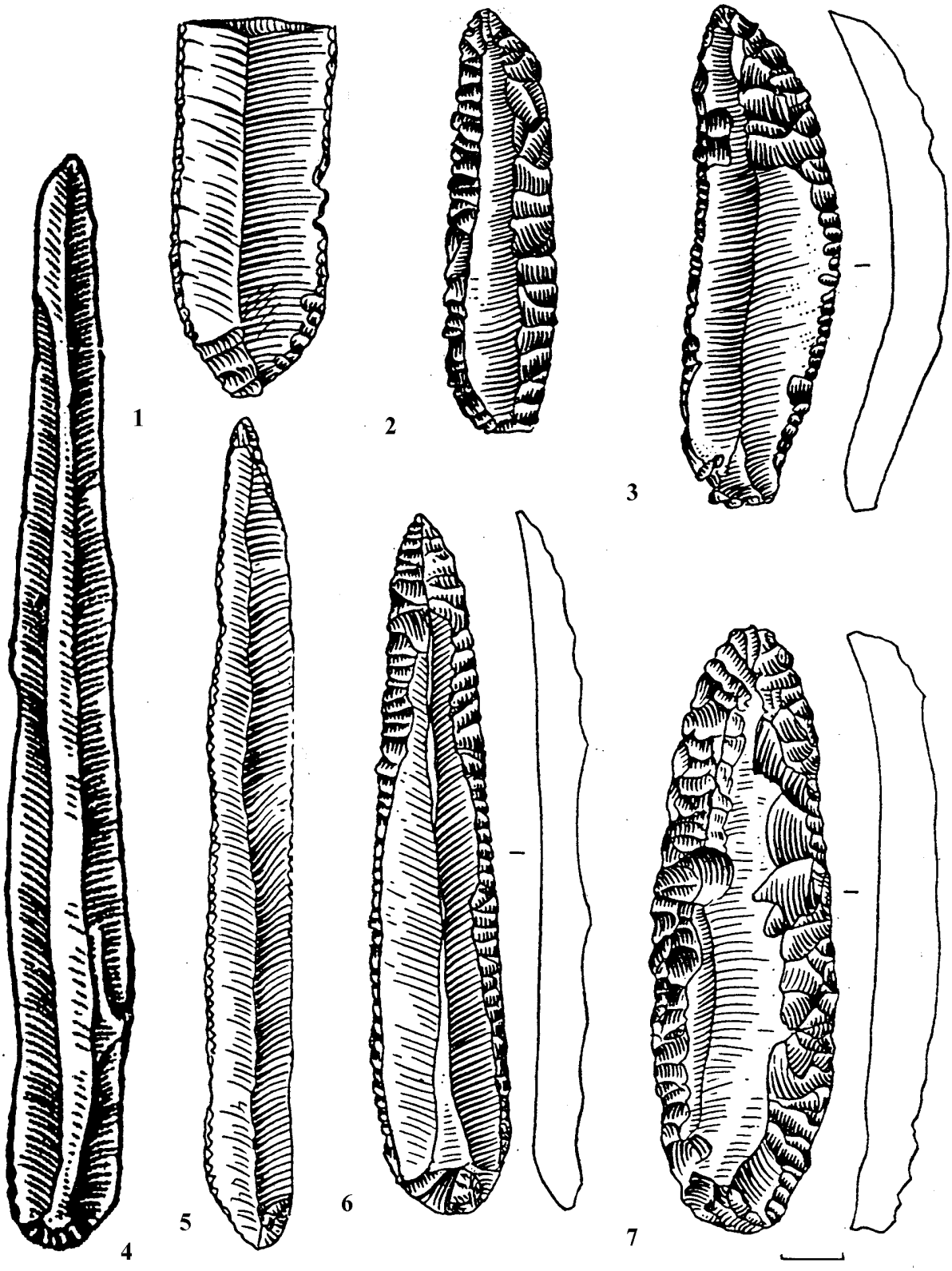


Fig. 80. Grave goods of ruined burials from Petro-Svistunovo (after Бодянский 1968).

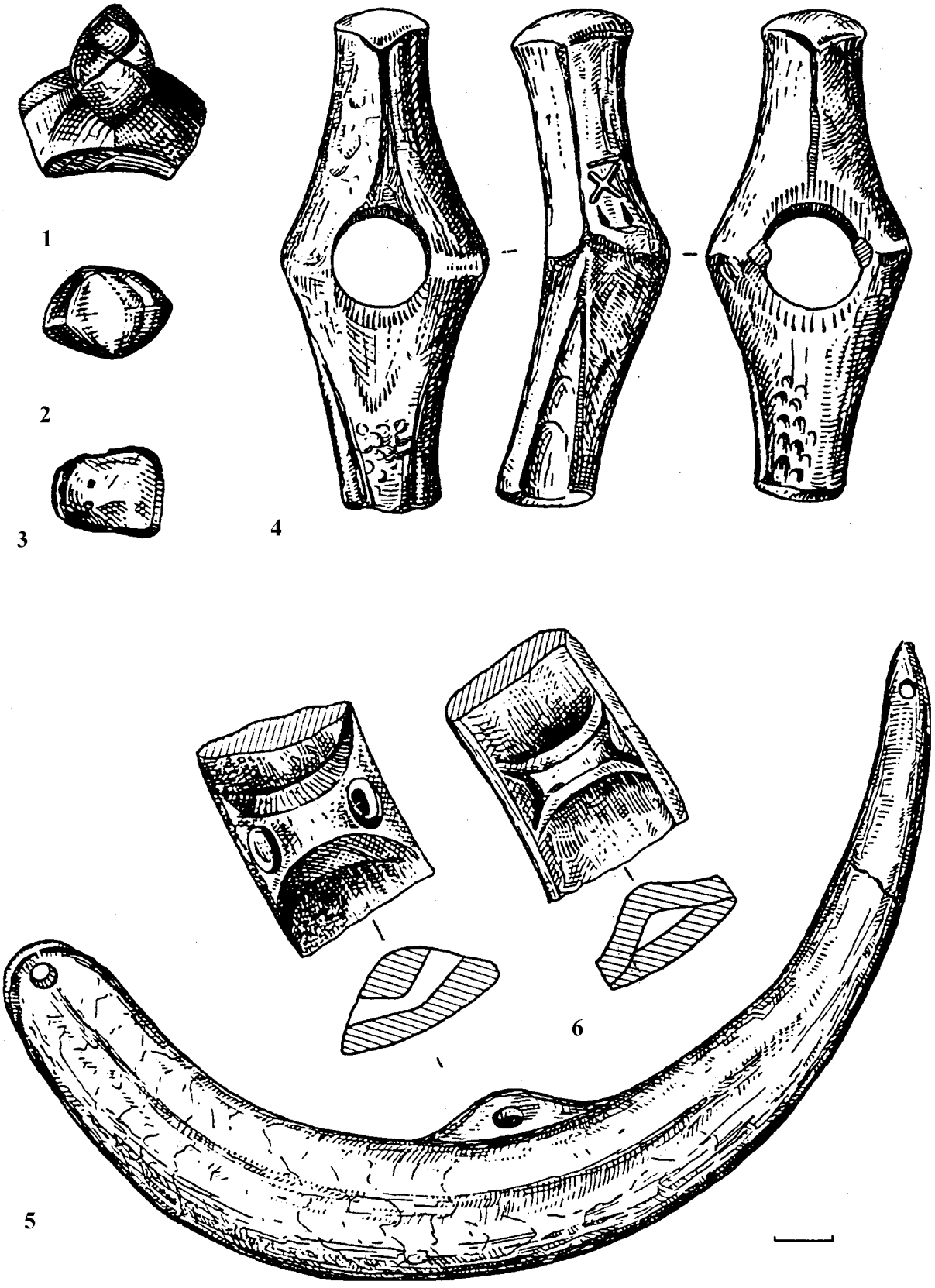


Fig. 81. Grave goods of ruined burials from Petro-Svistunovo (after Бодянский 1968). 1-4 - copper.

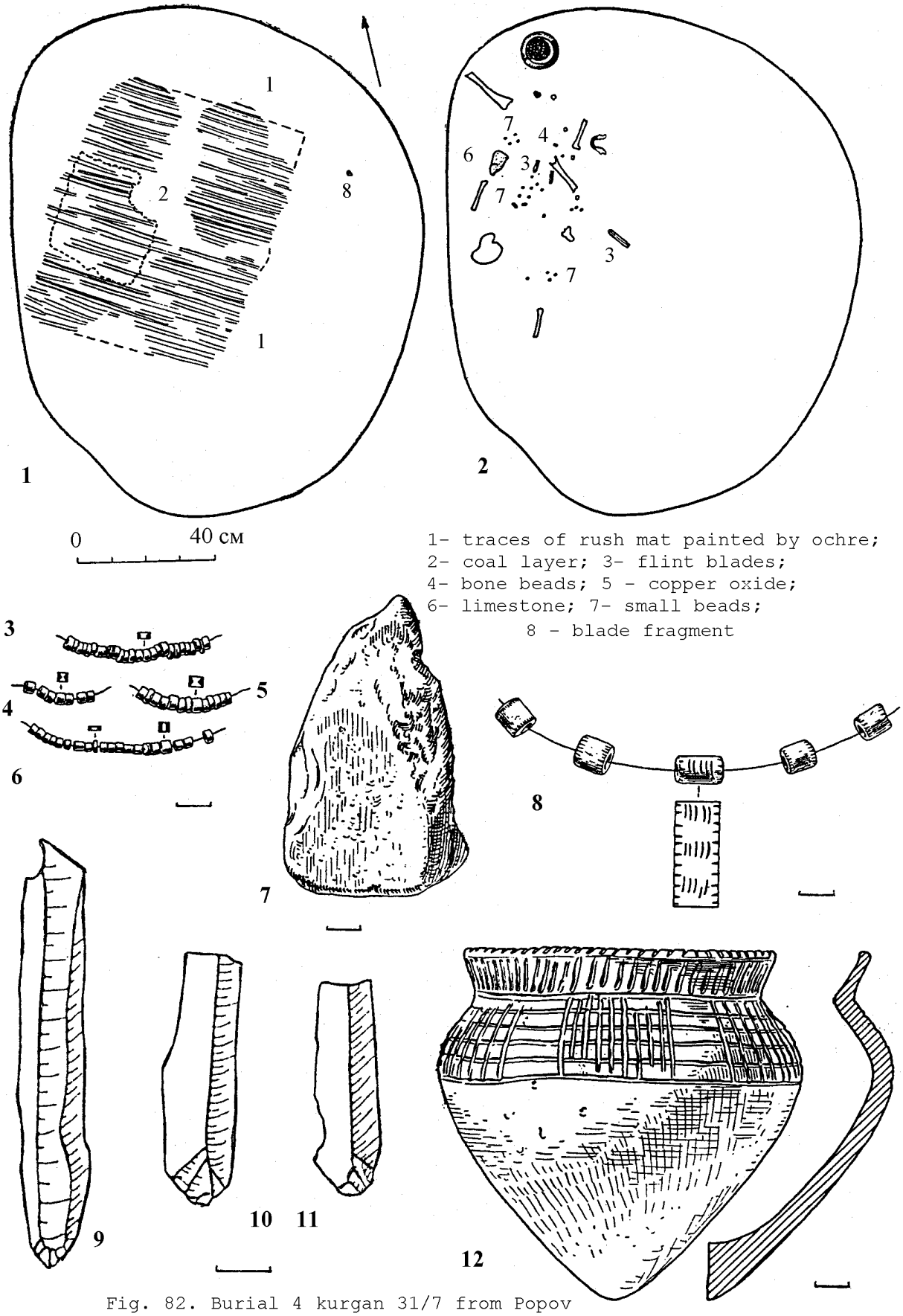


Fig. 82. Burial 4 kurgan 31/7 from Popov

(after Столяр 1958). 3-6 - beads from shell and paste; 7 - limestone; 8 - bone.

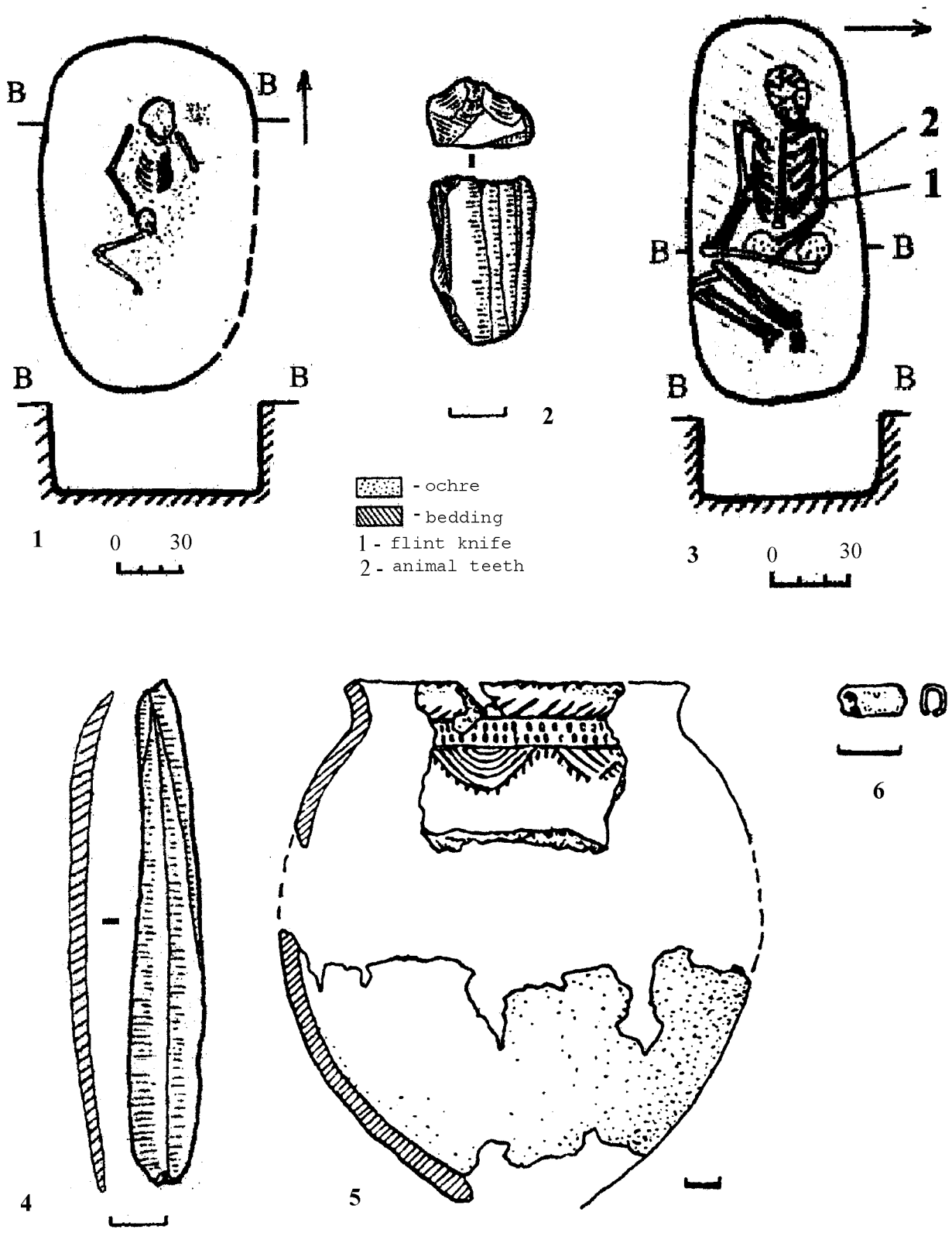


Fig. 83. Burials of the Sredniy Stog culture

1,2 - Tuzluki, kurgan 9 burial 28; 3,4 - Tuzluki, kurgan 9 burial 27; 5,6 - Tuzluki, kurgan 9 burial 32 (1-6 - after Нечитайло 2002; 2004). 6 - copper.

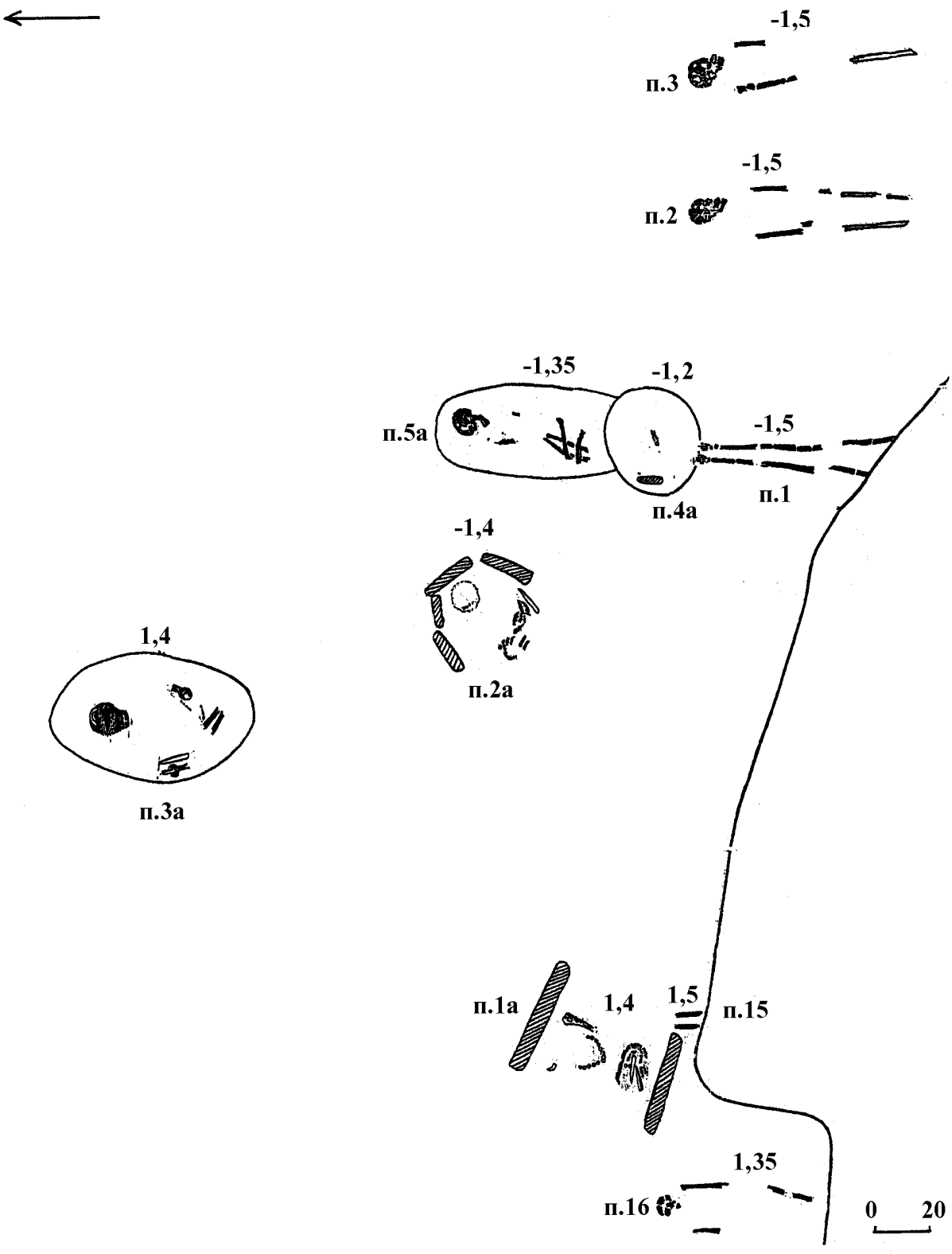


Fig. 84. Plan of Chapli cemetery
(after Добровольский 1954).

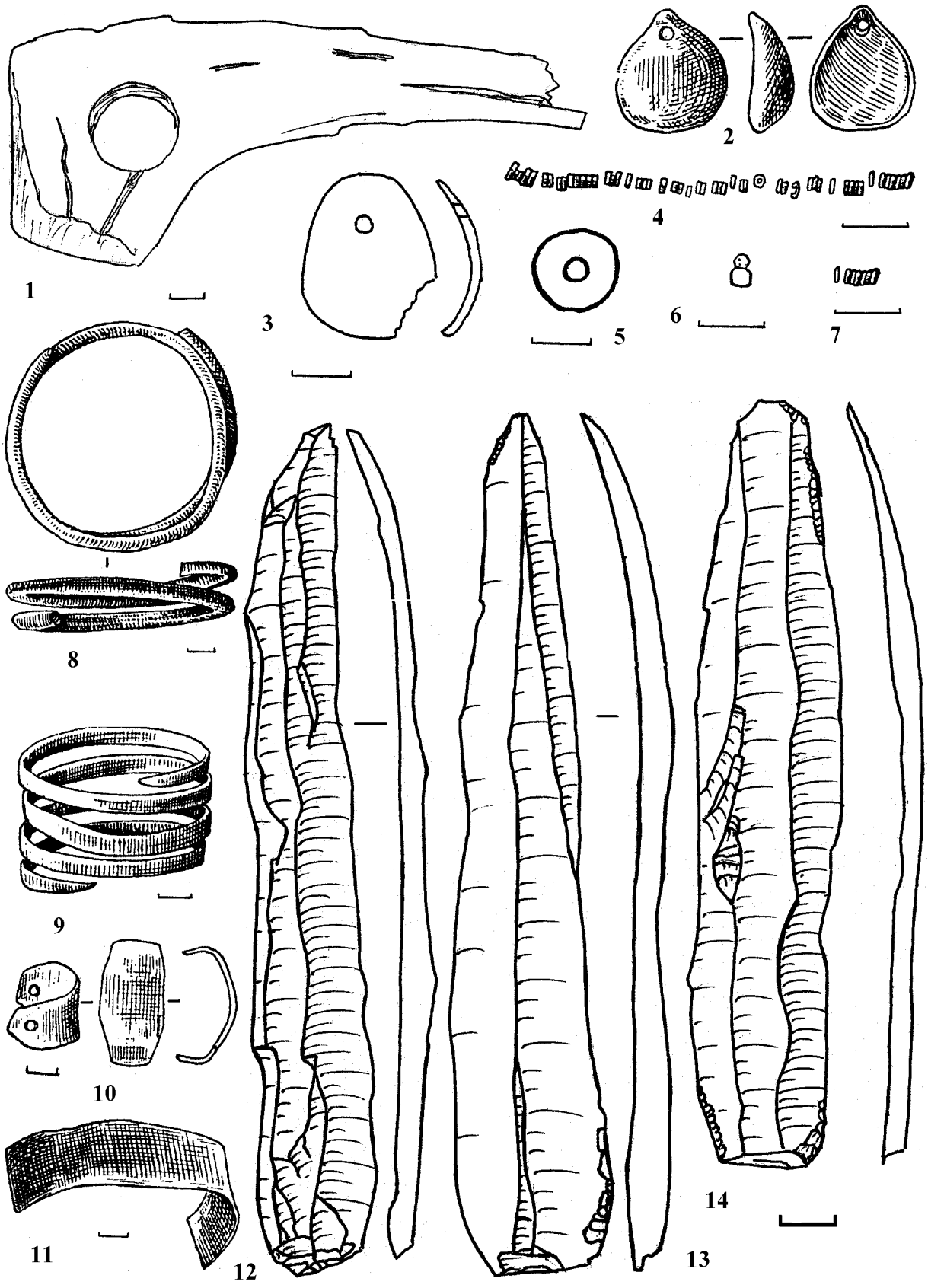


Fig. 85. Chapli cemetery

1-5,12,13 - burial 1; 6-11 - burial 3; 14 - buarial 2 (after Добровольский 1954). 1 - bone; 2-11 - copper.

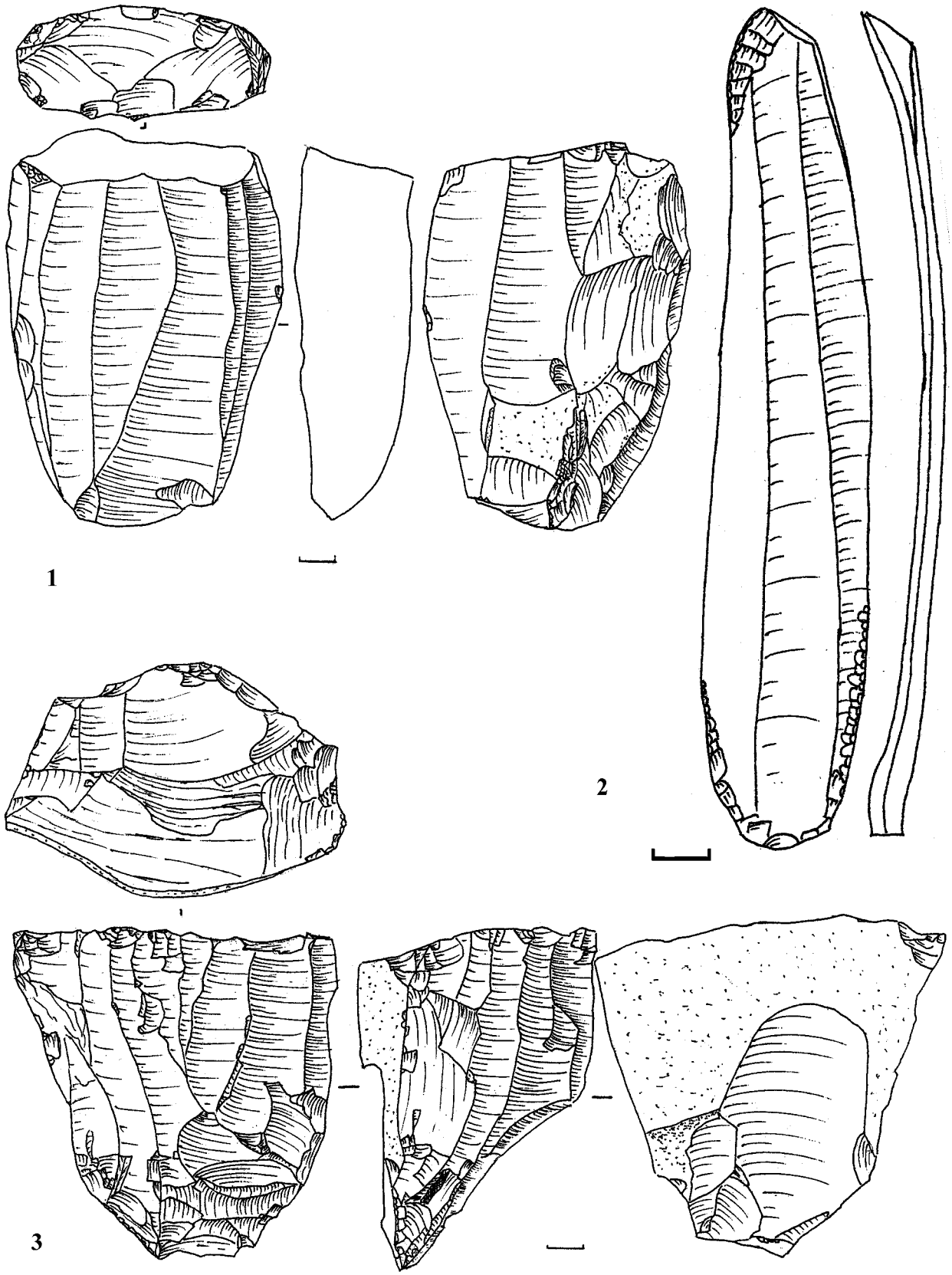


Fig. 86. Chapli cemetery
1,2 - sacrificial area by burial 3; 3 - inventory from burial 3.

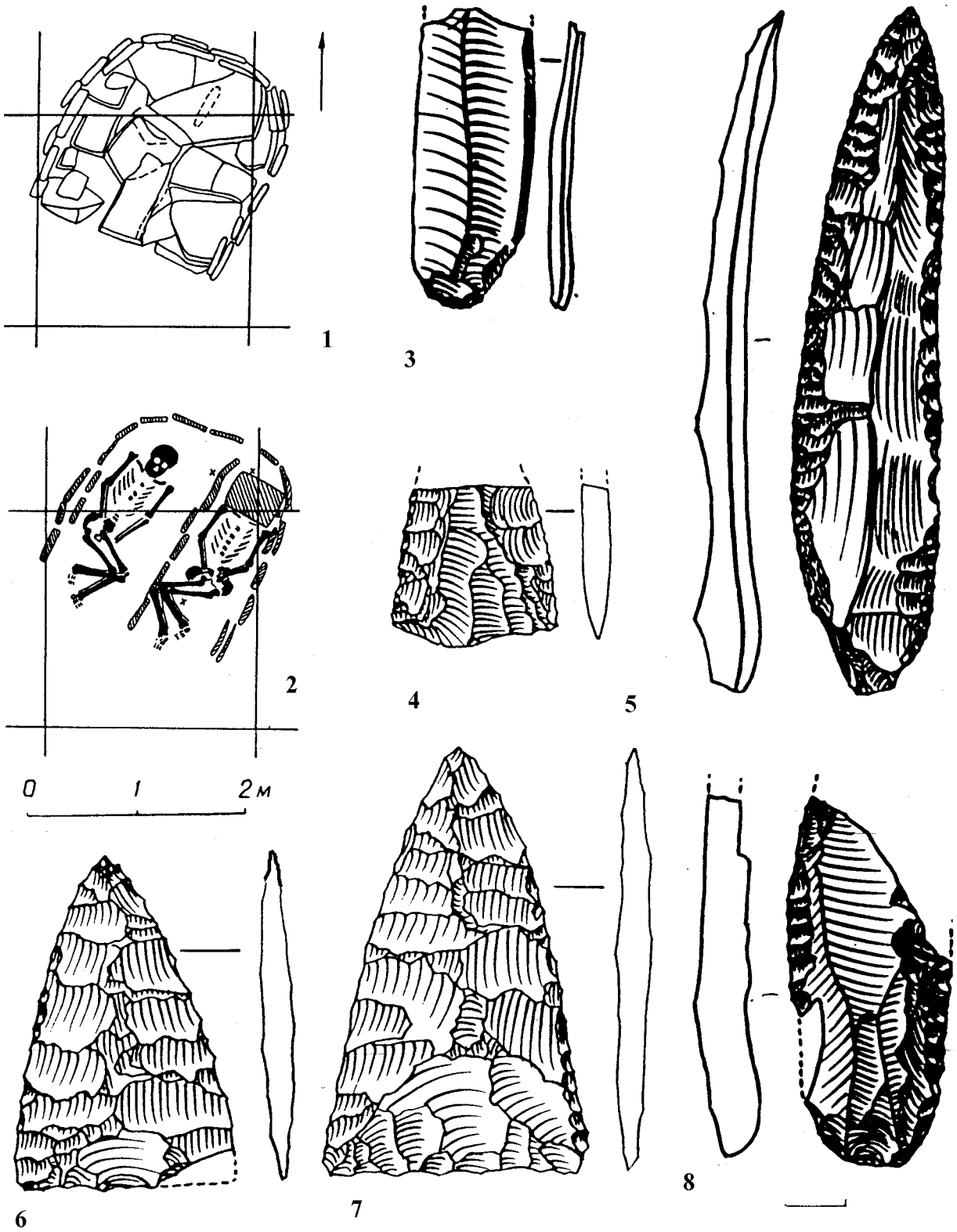


Fig. 87. Yama cemetery

1,2 - plans of tomb and burials 1 and 2; 3-5,8 - grave goods of burials 1 and 2; 6,7 - grave goods of ruined burials (after Телегин 1966).

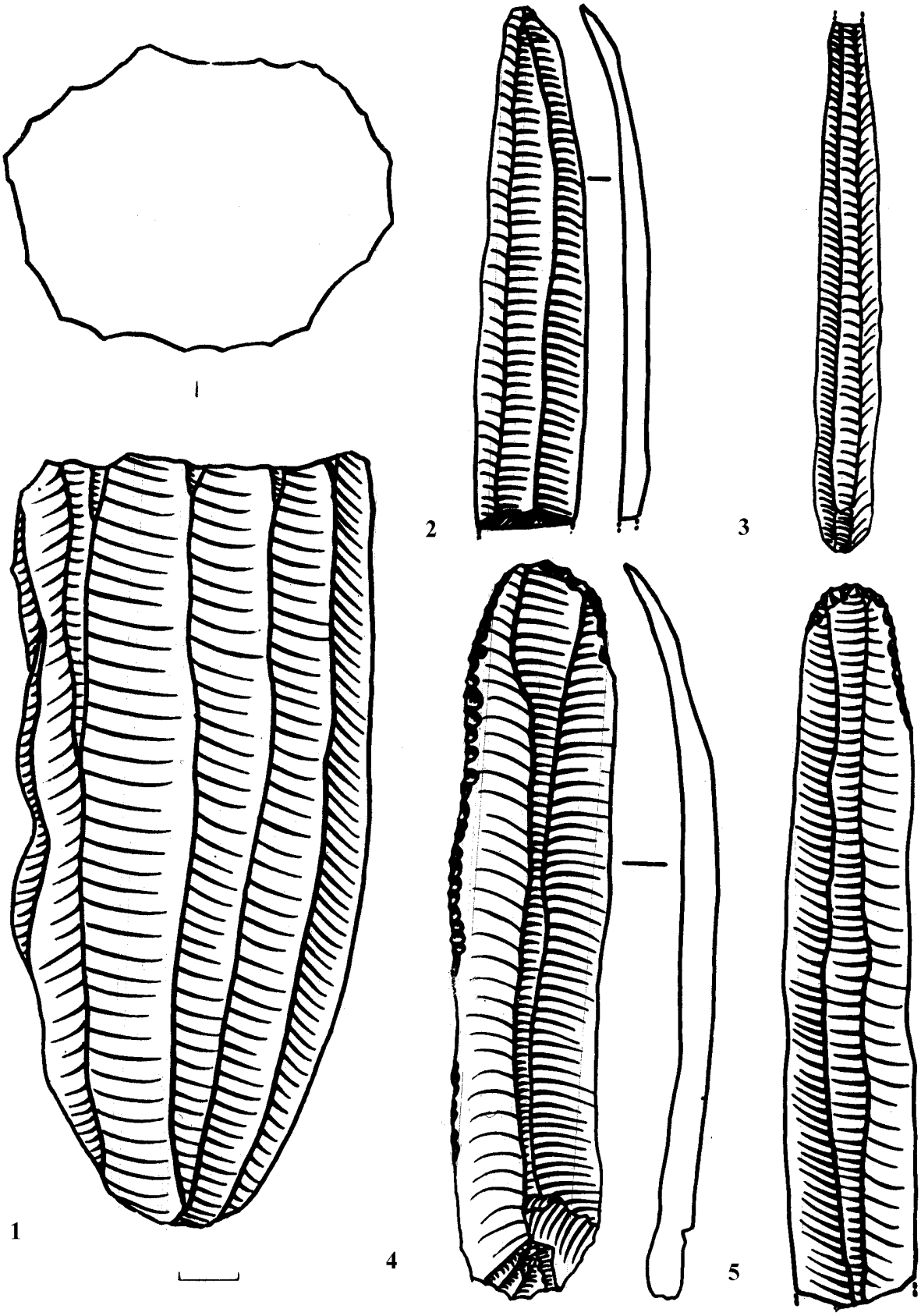


Fig. 88. Grave goods of ruined burials from Yama (after Телегин 1966).

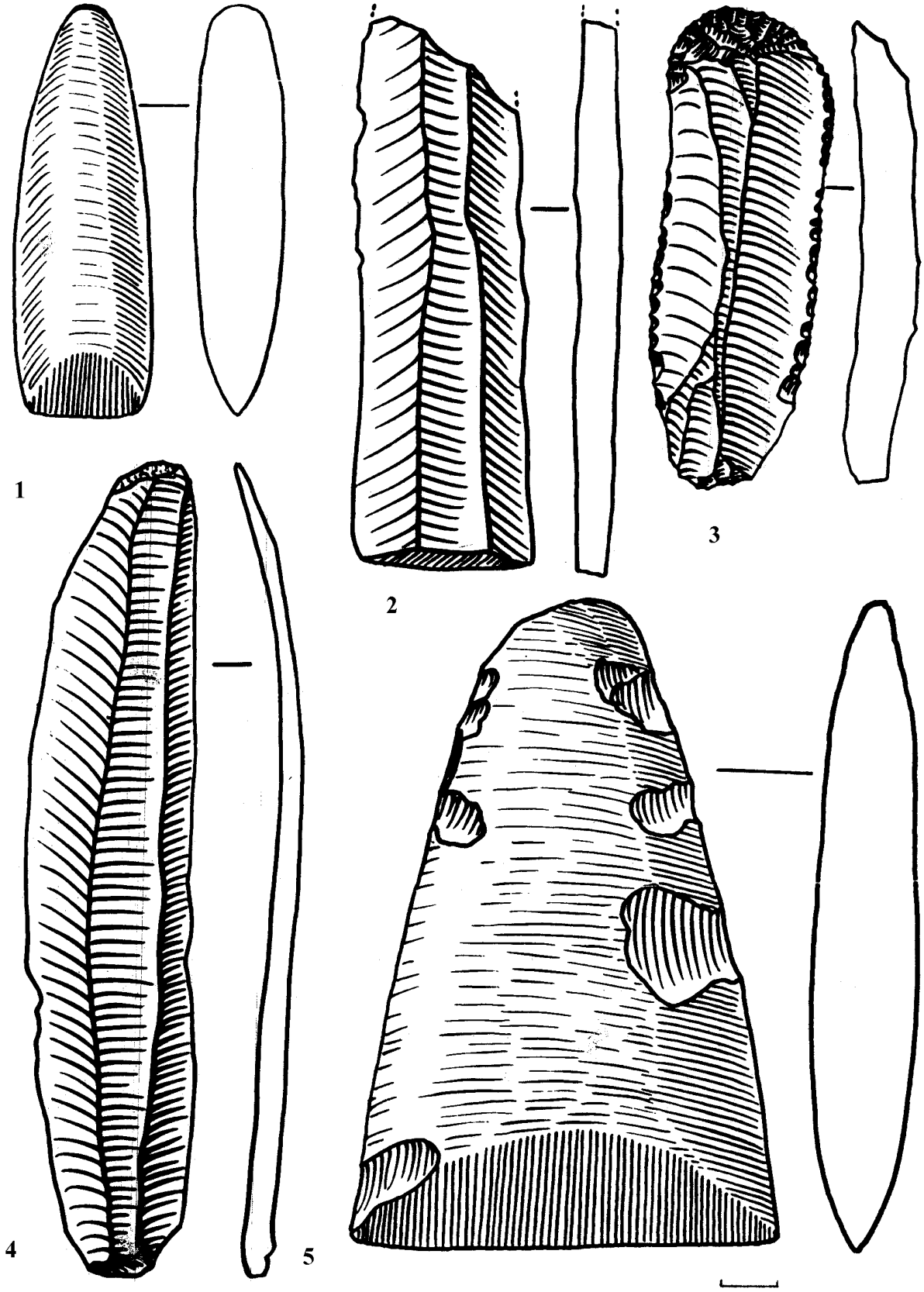


Fig. 89. Grave goods of ruined burials from Yama (after Телегин 1966).

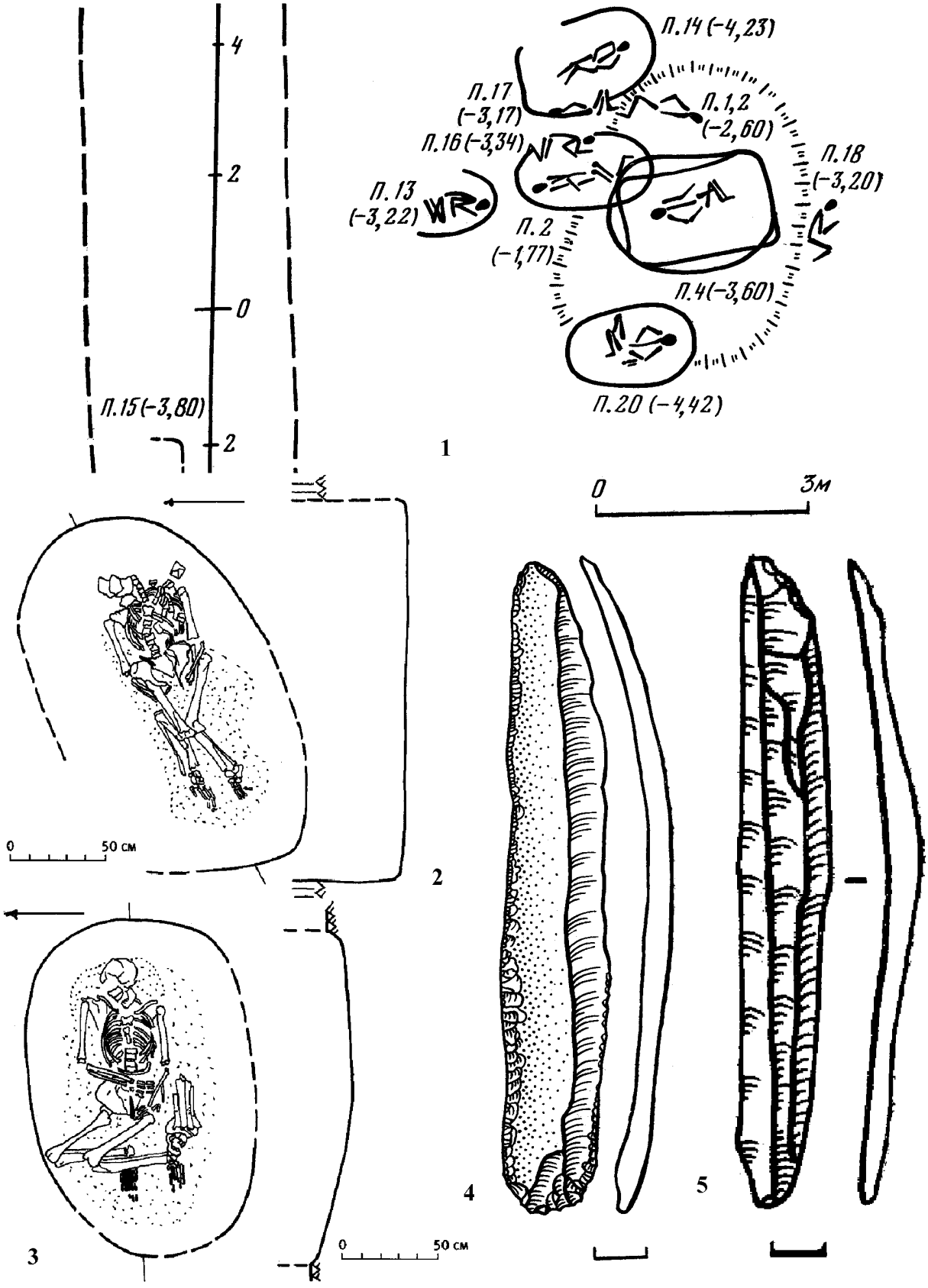


Fig. 90. Kurgan 3 from Baturinskaja

1 - plan of burials location; 2,5 - burial 14; 3,4 - burial 20 (after Шарафутдинова 1983).

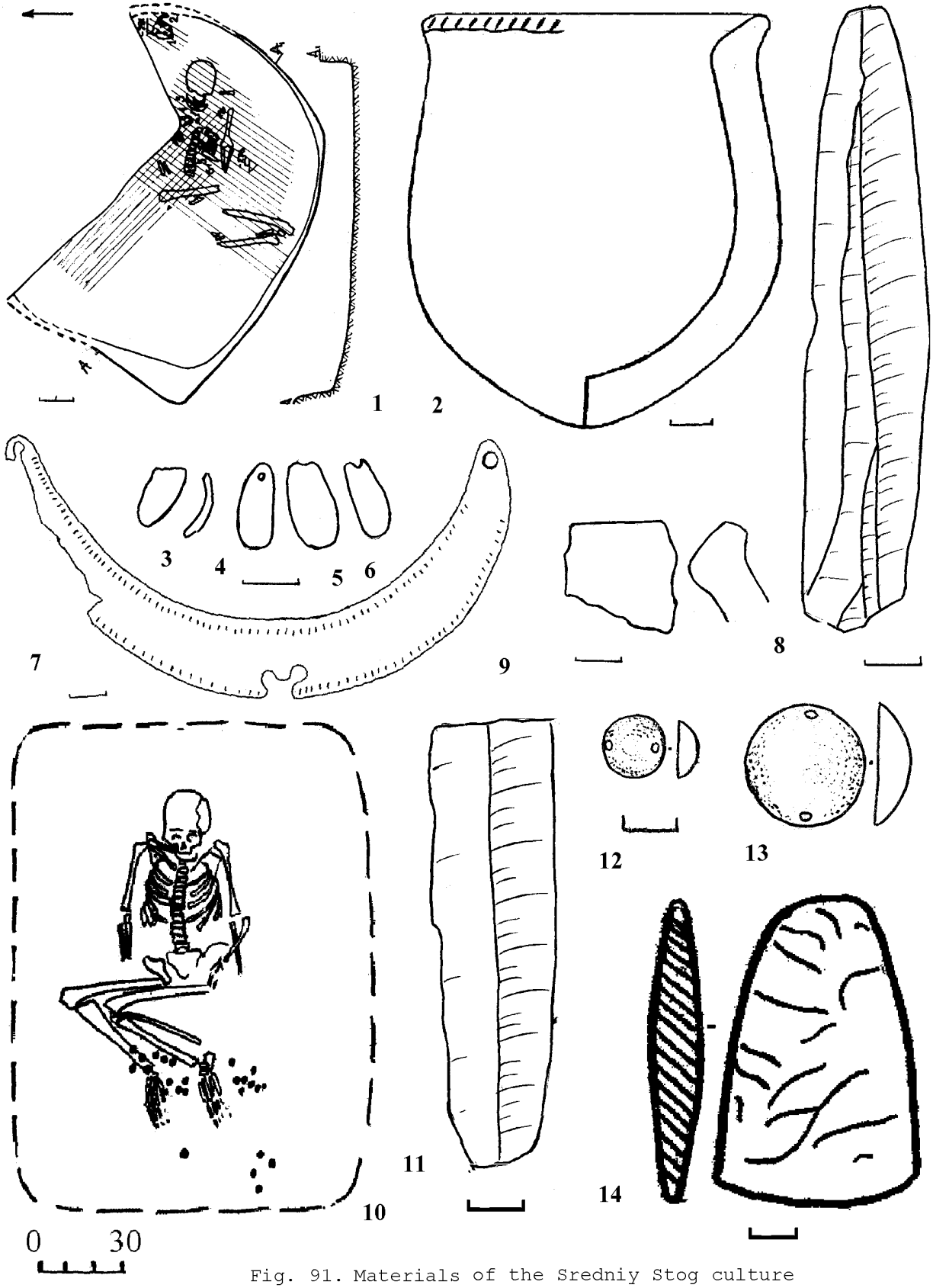


Fig. 91. Materials of the Sredniy Stog culture

1-8 - Veselaja Roscha, kurgan 15 burial 1; Razdorskoe settlement;
10-14 - Verkhniy Akbash, burial 11 (1-8 - after Романовская 1982;
10-14 - after Кореневский, Наглер 1987). 3-6,12,13 - copper.

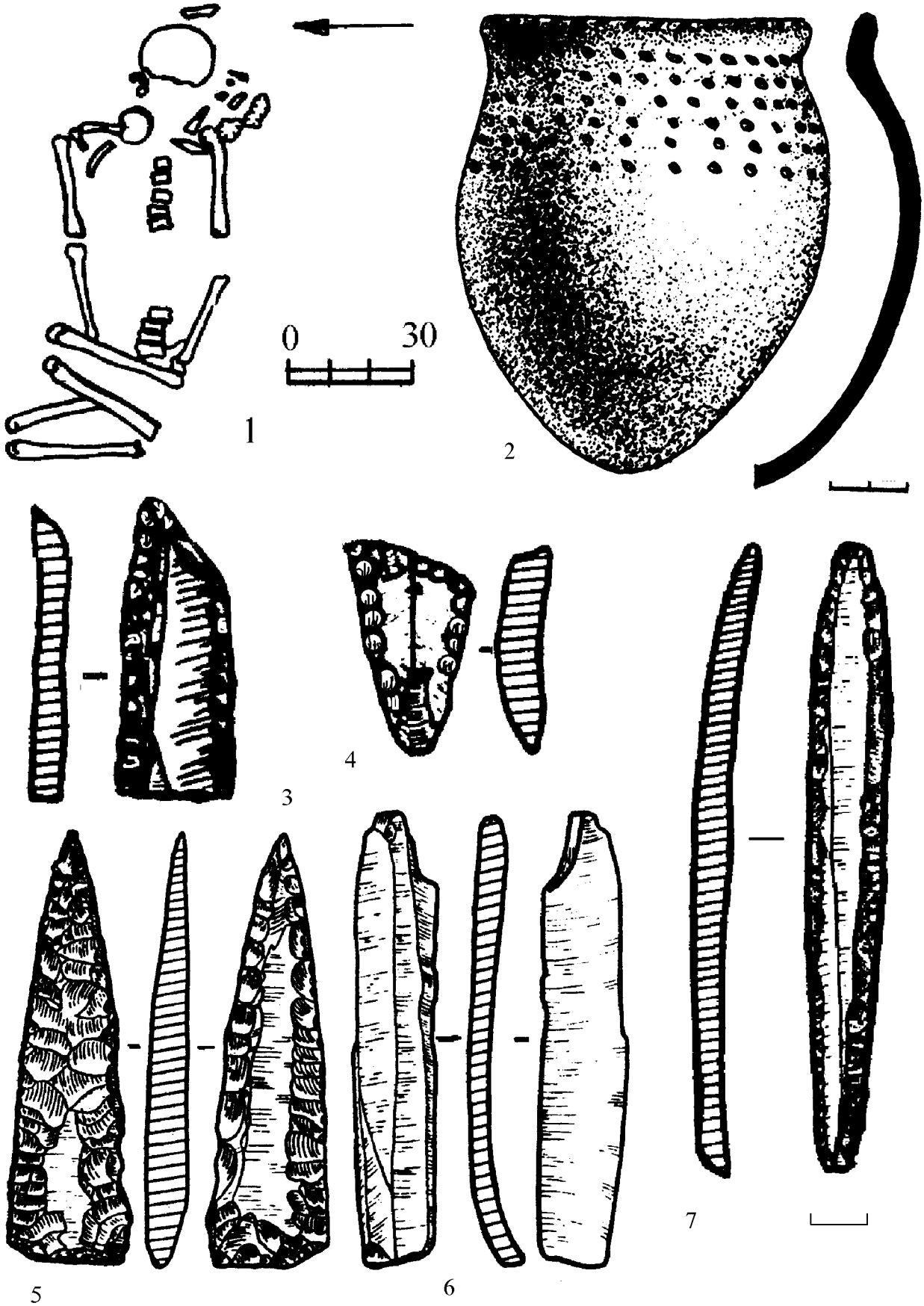


Fig. 92. Veselaja Roscha, kurgan 24 burial 3 (after Державин 1989).

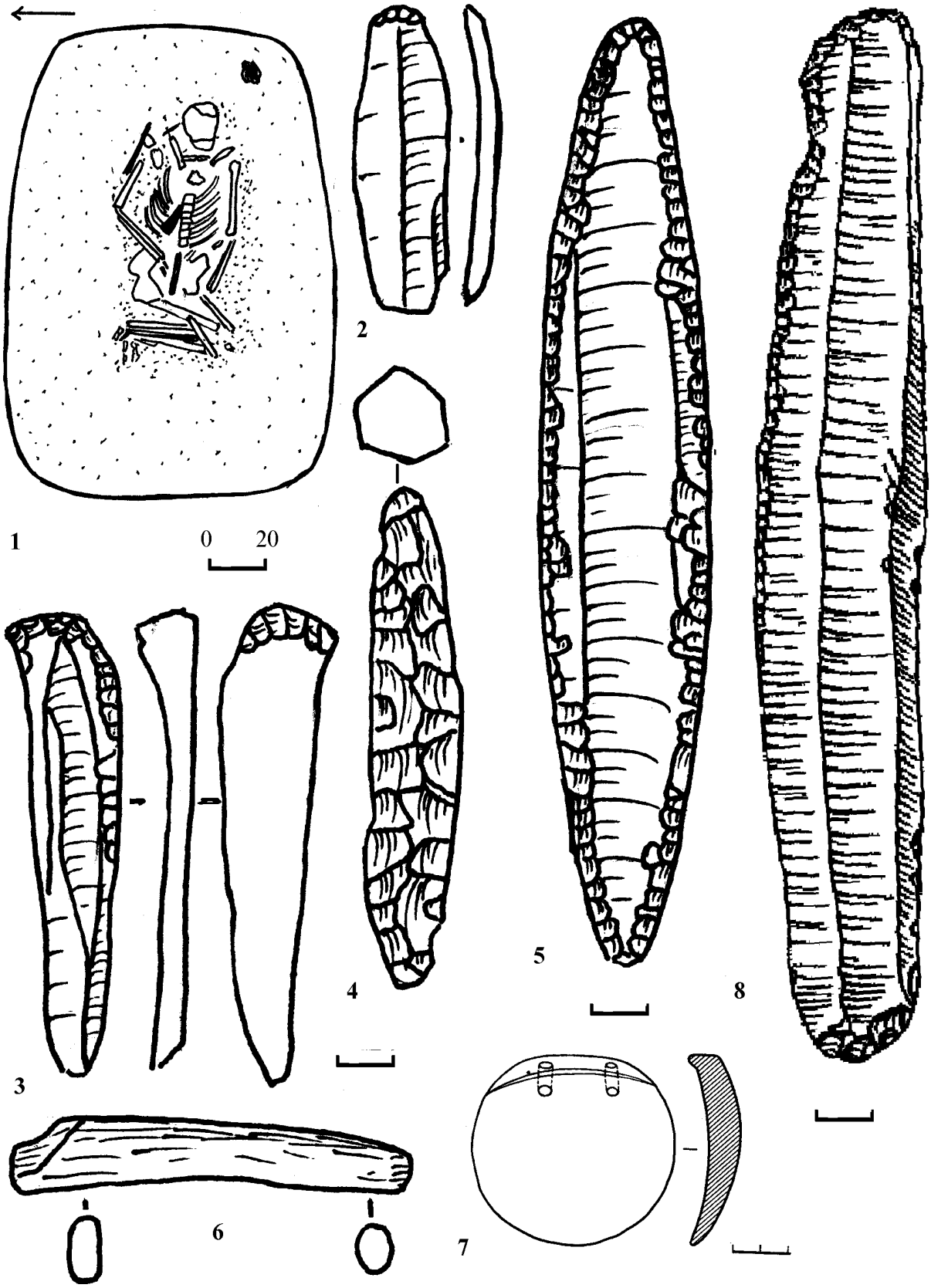


Fig. 93. Burials of the Sredniy Stog culture

1-6 - Komarovo, kurgan 2 burial 18; 7,8 - grave goods of burial from Grozny. (1-6 - after Гиджрати 1986; 7,8 - after Мунчаев 1975).
6 - bone; 7 - stone.

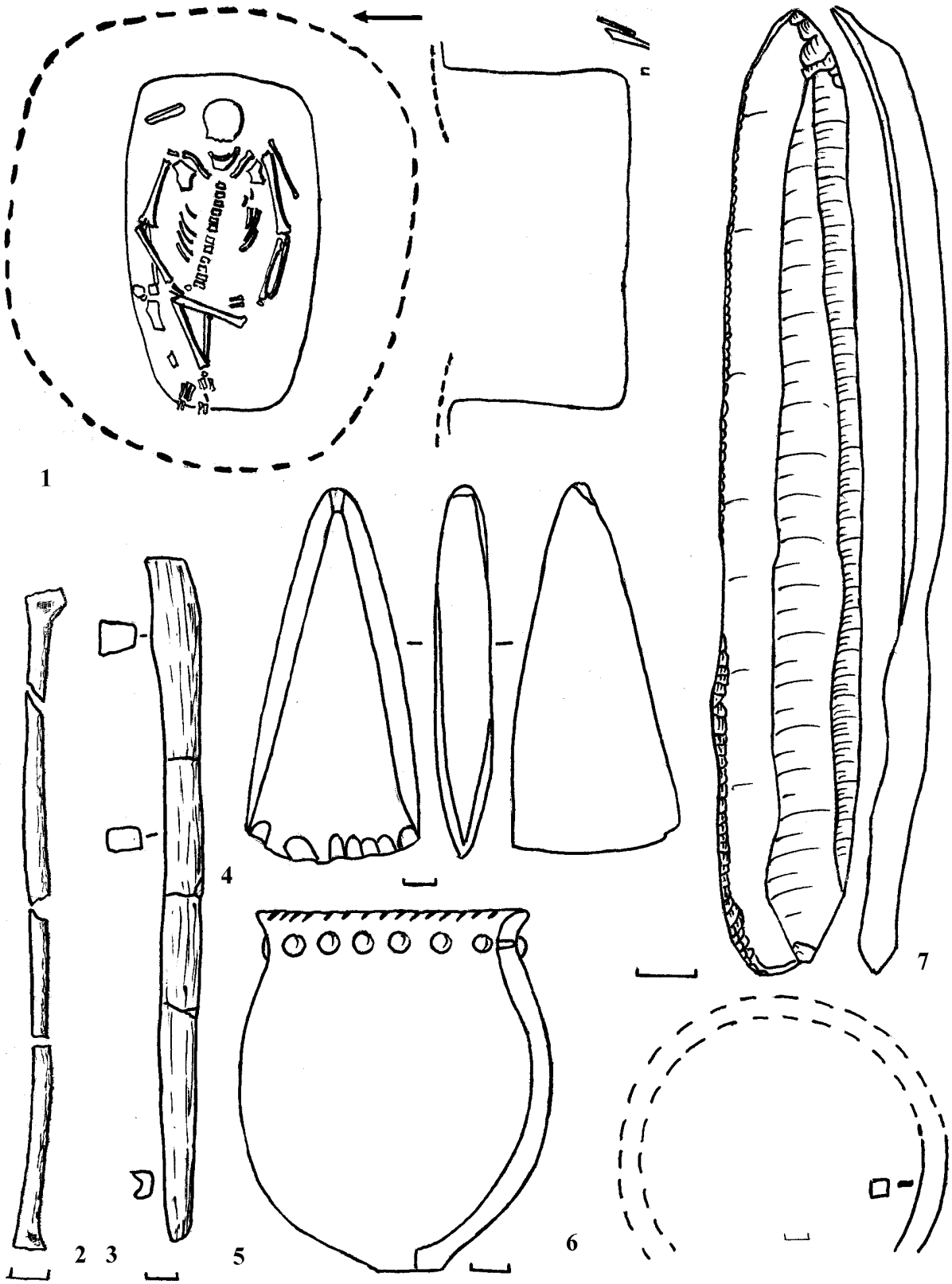


Fig. 94. Burials of the Sredniy Stog culture

1,2,7 - Komarovo, kurgan 7 burial 9; 3-6 - Komarovo, kurgan 2 burial 18. (1,2,7 - after Кореневский, Наглер 1987; 3-6 - after Гиджрати 1986). 2,3 - bone; 4,6 - stone.

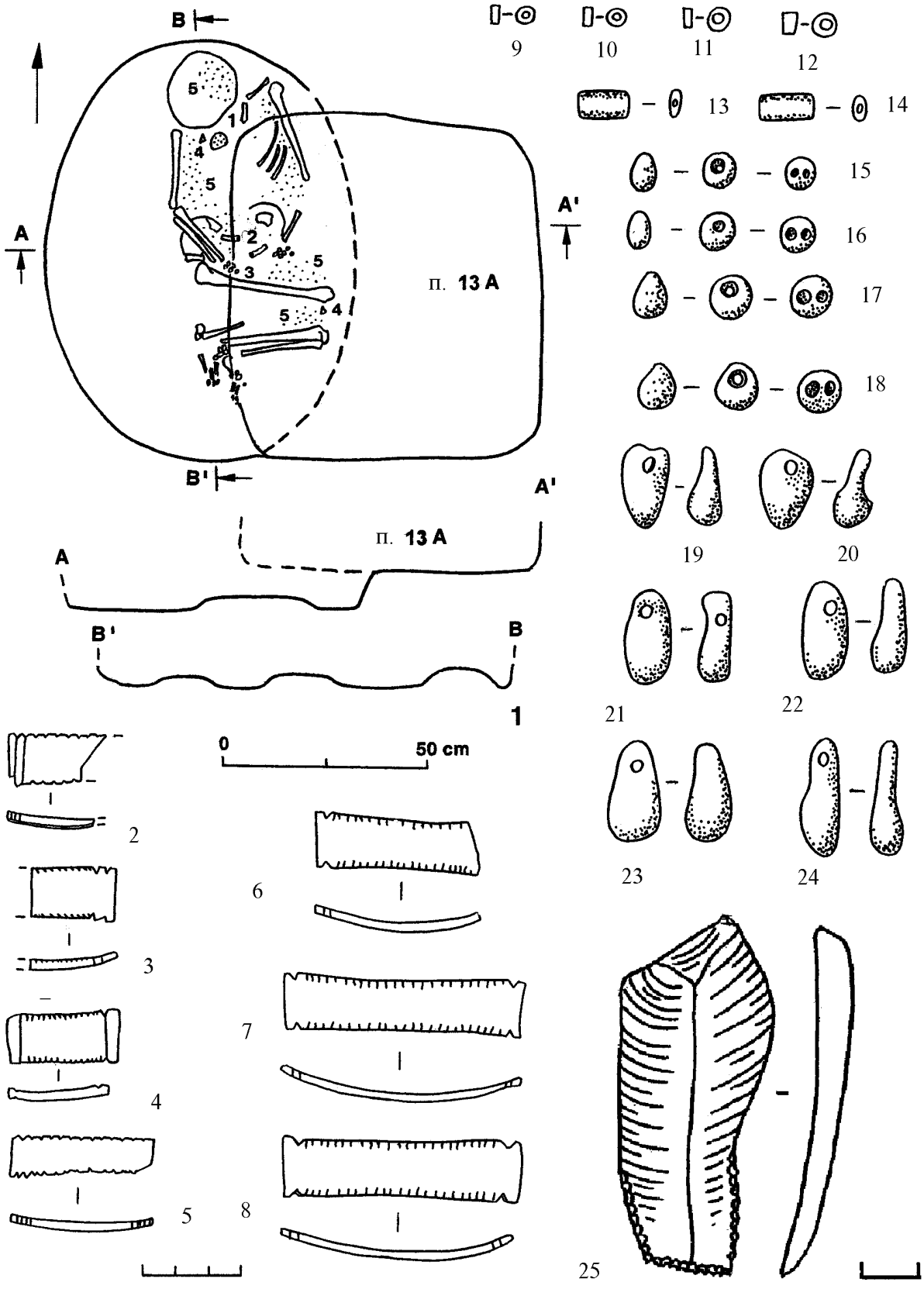


Fig. 95. Burial 13 from Staronizhesteblievskaja

2-8 - boar fang; 9-12 - shell; 13-18 - bone; 19-24 - deer teeth (after Rezepkin 2000).

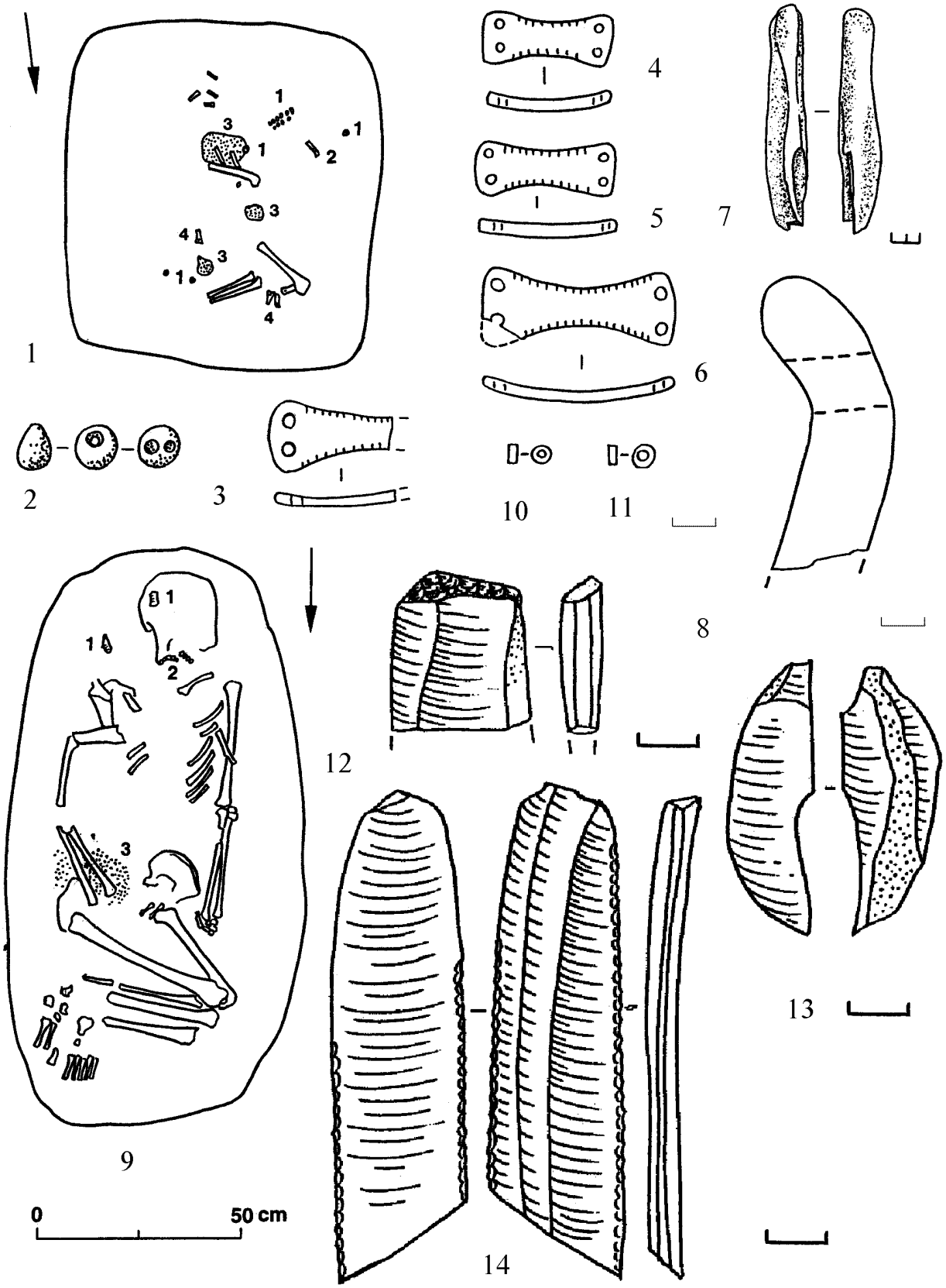


Fig. 96. Burials of the Sredniy Stog culture from Staronizhesteblievskaja
1-8 - burial 13; 9-14 - burial 14 (after Rezepkin 2000).
2,7,8 - bone; 3-6 - boar fang; 10,11 - shell.

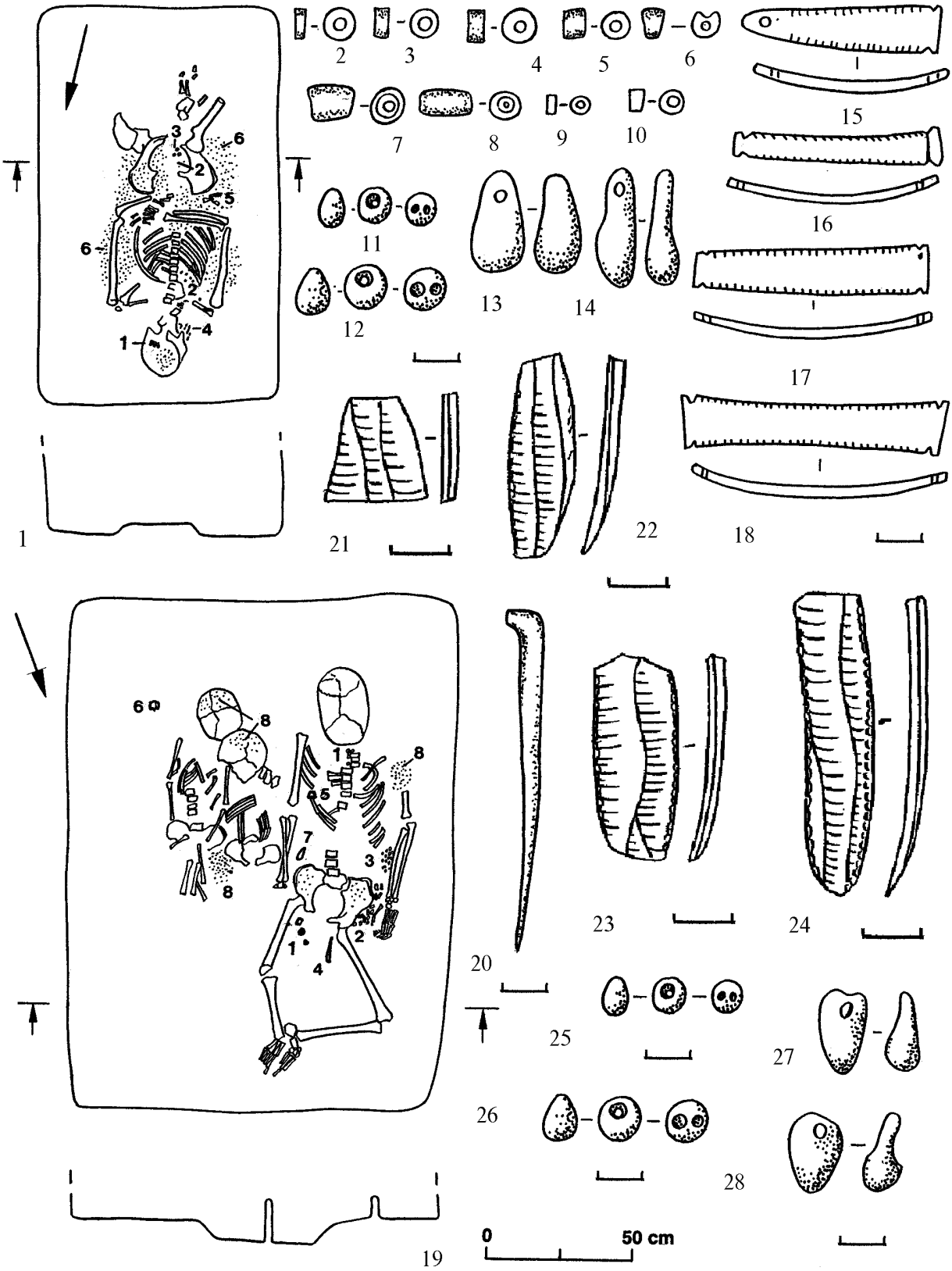


Fig. 97. Burials of the Sredniy Stog culture from Staronizhesteblievskaja

1-18 - burial 29; 19-28 - burial 30 (after Rezepkin 2000).
2-5 - jet; 6,7 - stone; 8,11,12,20,25,26 - bone; 9,10 - shell;
13,14,27,28 - deer teeth and their imitations; 15-18 - boar fang.

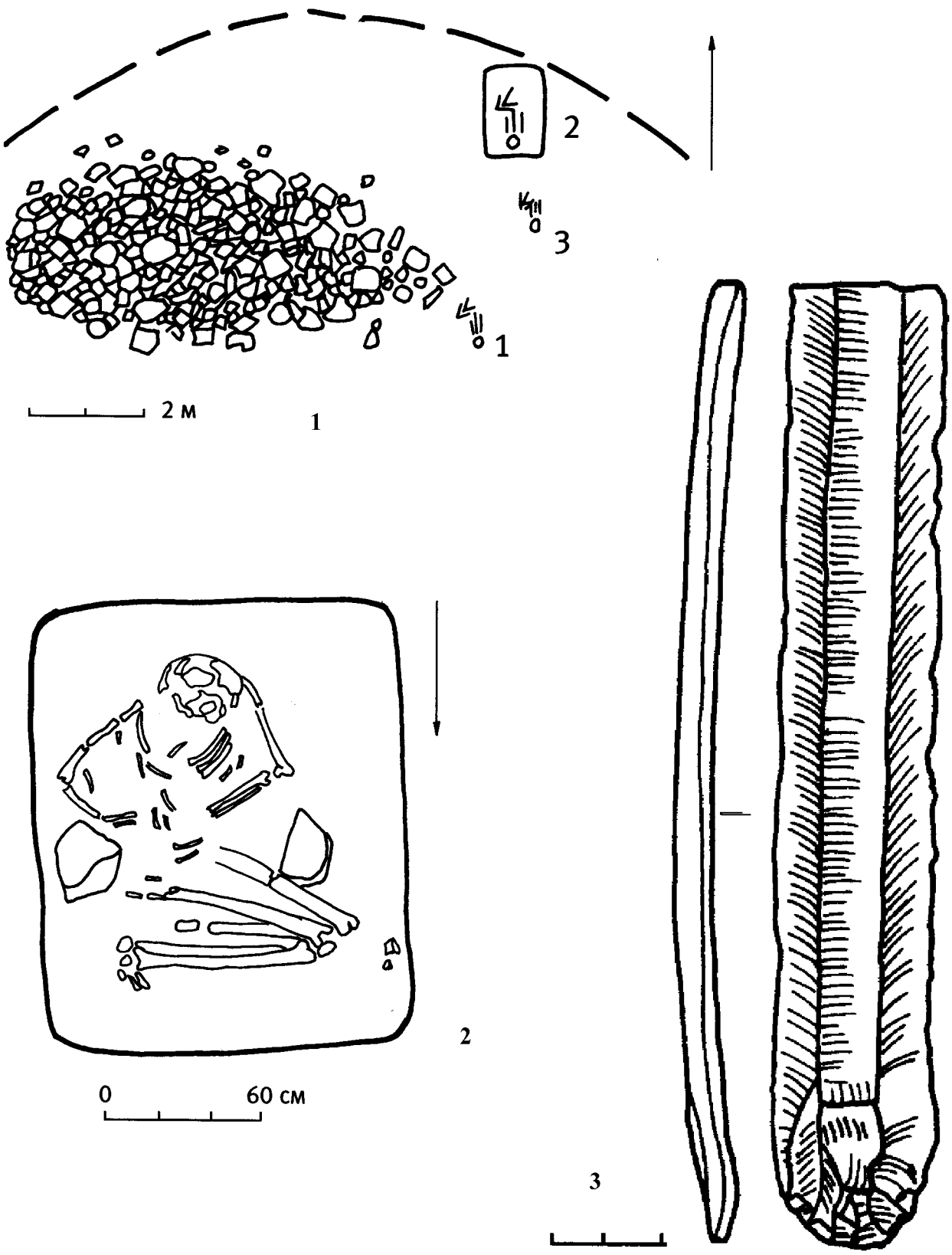


Fig. 98. Gonova Mogila

1 - schematic plan of the burials location; 2 - burial 2; 3 - inventory from burial 1 (after Rassamakin 2004).

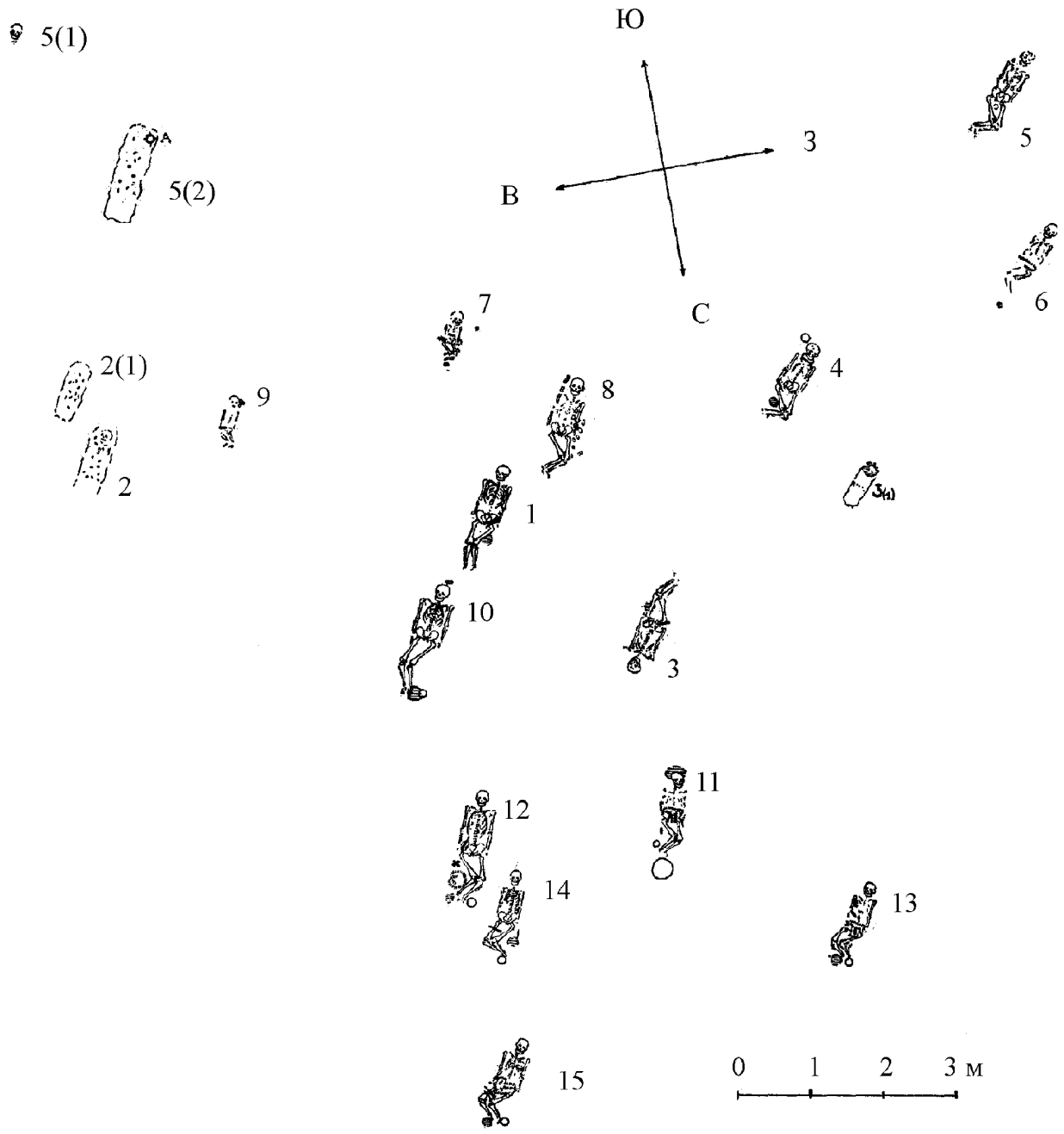


Fig. 99. Plan of Decea Muresului cemetery (after Kovacs 1944).

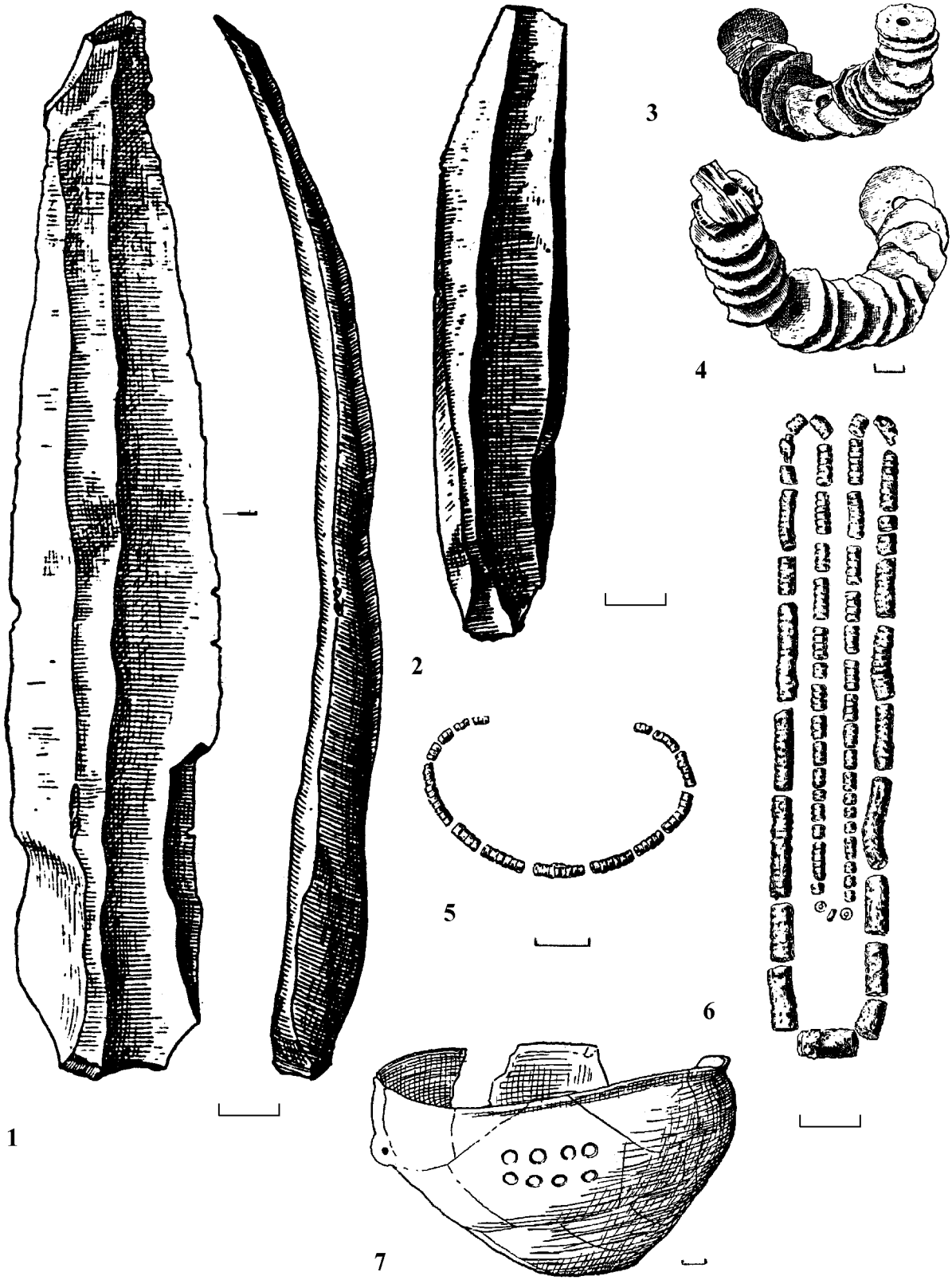


Fig. 100. Grave goods from Decea Muresului cemetery

1,6 - burial 3; 2 - burial 1; 3 - burial 2; 4 - burial 2(1); 5 - burial 3 (1); 7 - burial 8 (after Kovacs 1944).

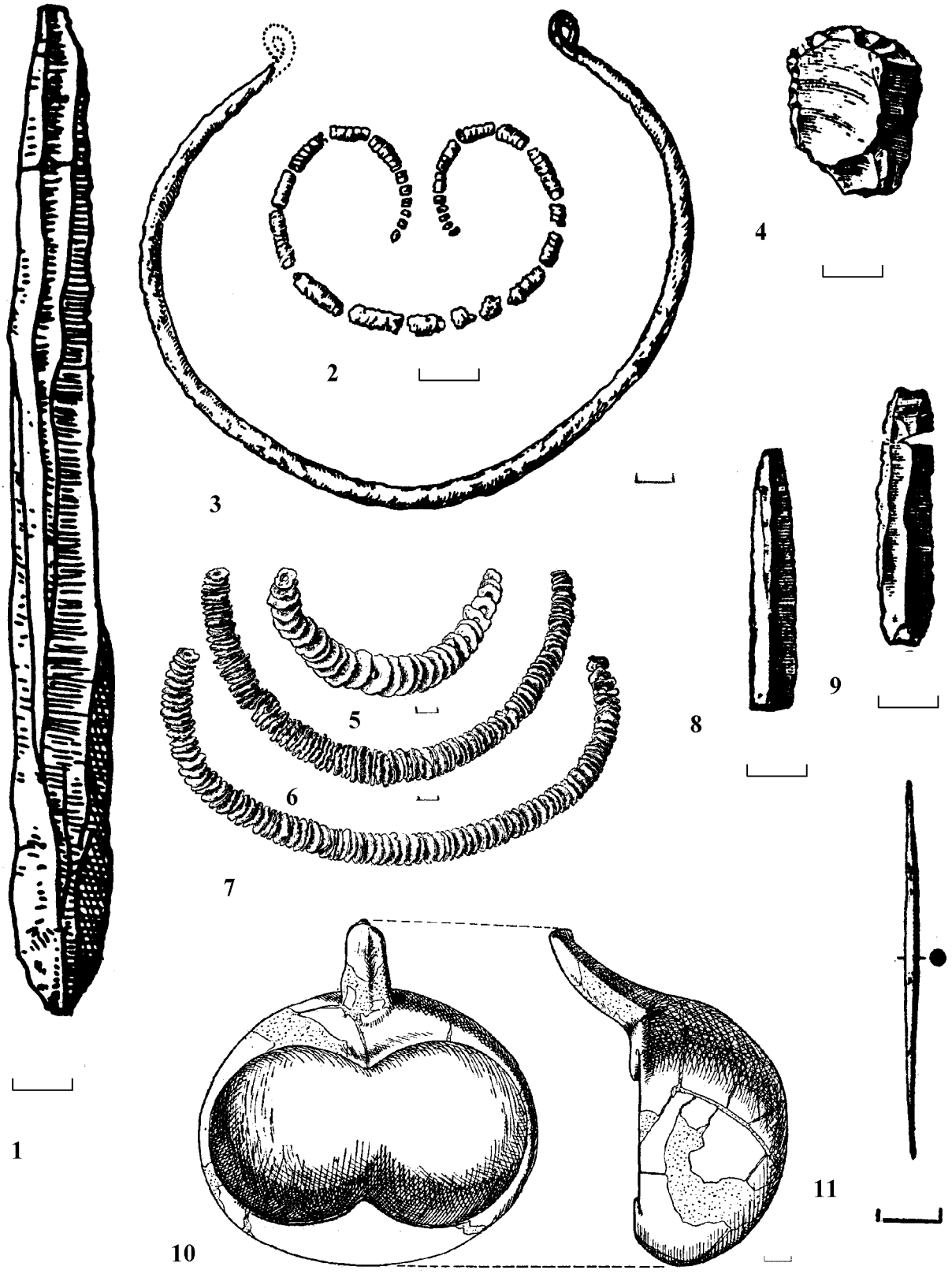


Fig. 101. Grave goods from Decea Muresului cemetery

1-3 - burial 4; 4 - burial 5; 5 - burial 5 (2); 6 - burial 6;
7,9 - burial 7; 8 - burial 9; 10,11 - burial 10 (after Kovacs 1944).

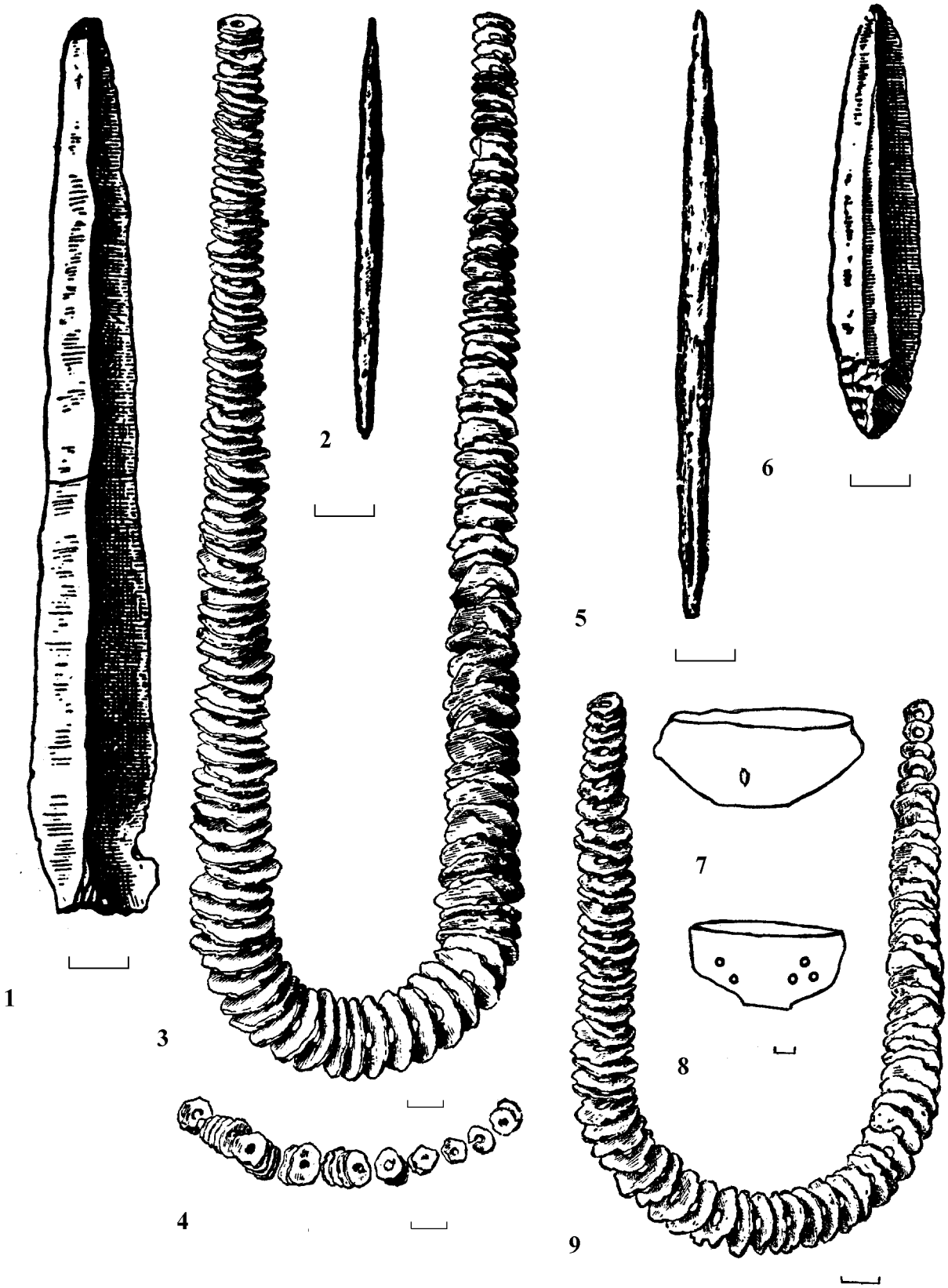


Fig. 102. Grave goods from Decea Muresului cemetery
1-4 - burial 15; 5-9 - burial 11 (after Kovacs 1944).

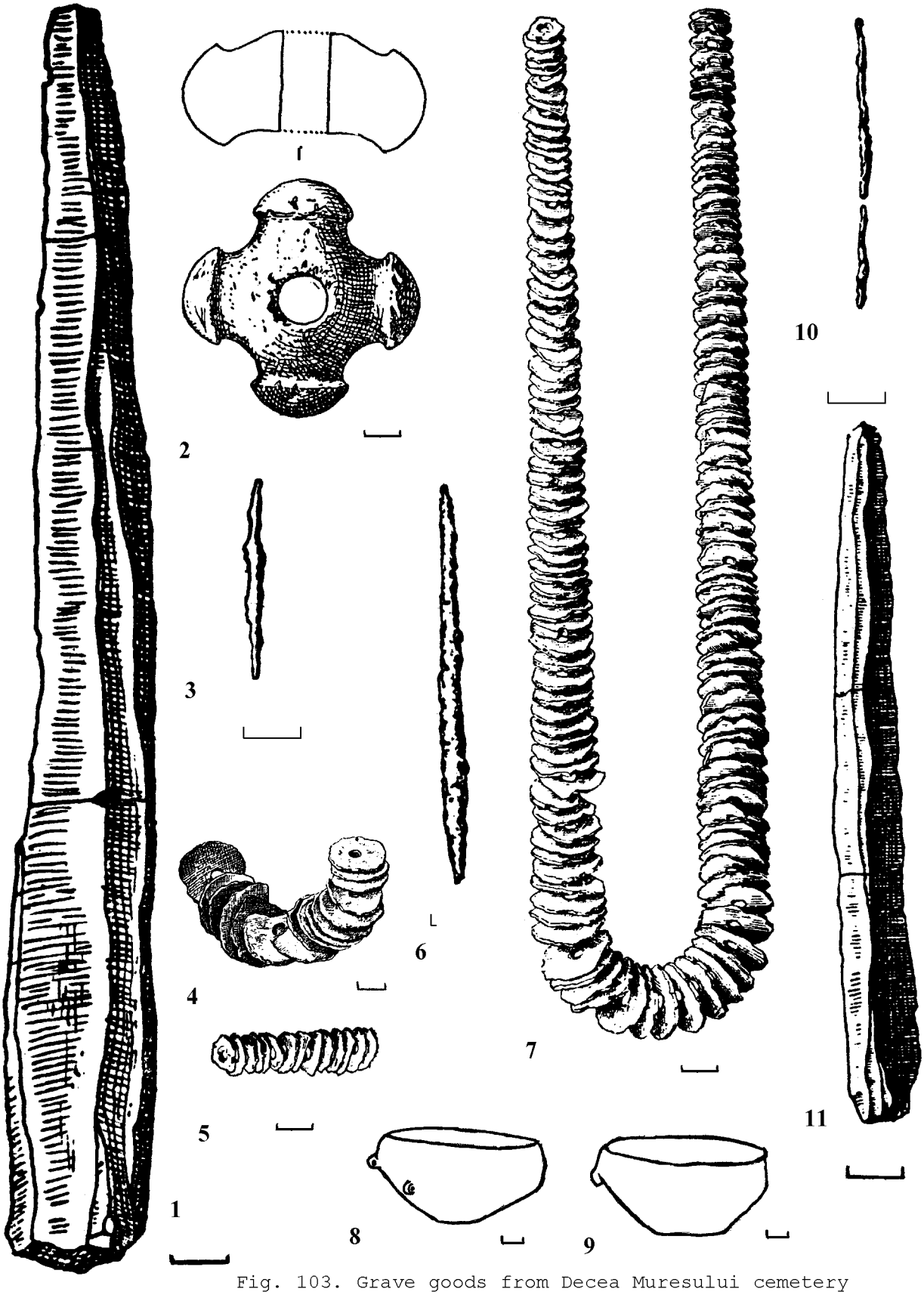


Fig. 103. Grave goods from Decea Muresului cemetery
1-5 - burial 12; 6-8 - burial 13; 9-11 - burial 14 (after Kovacs 1944)

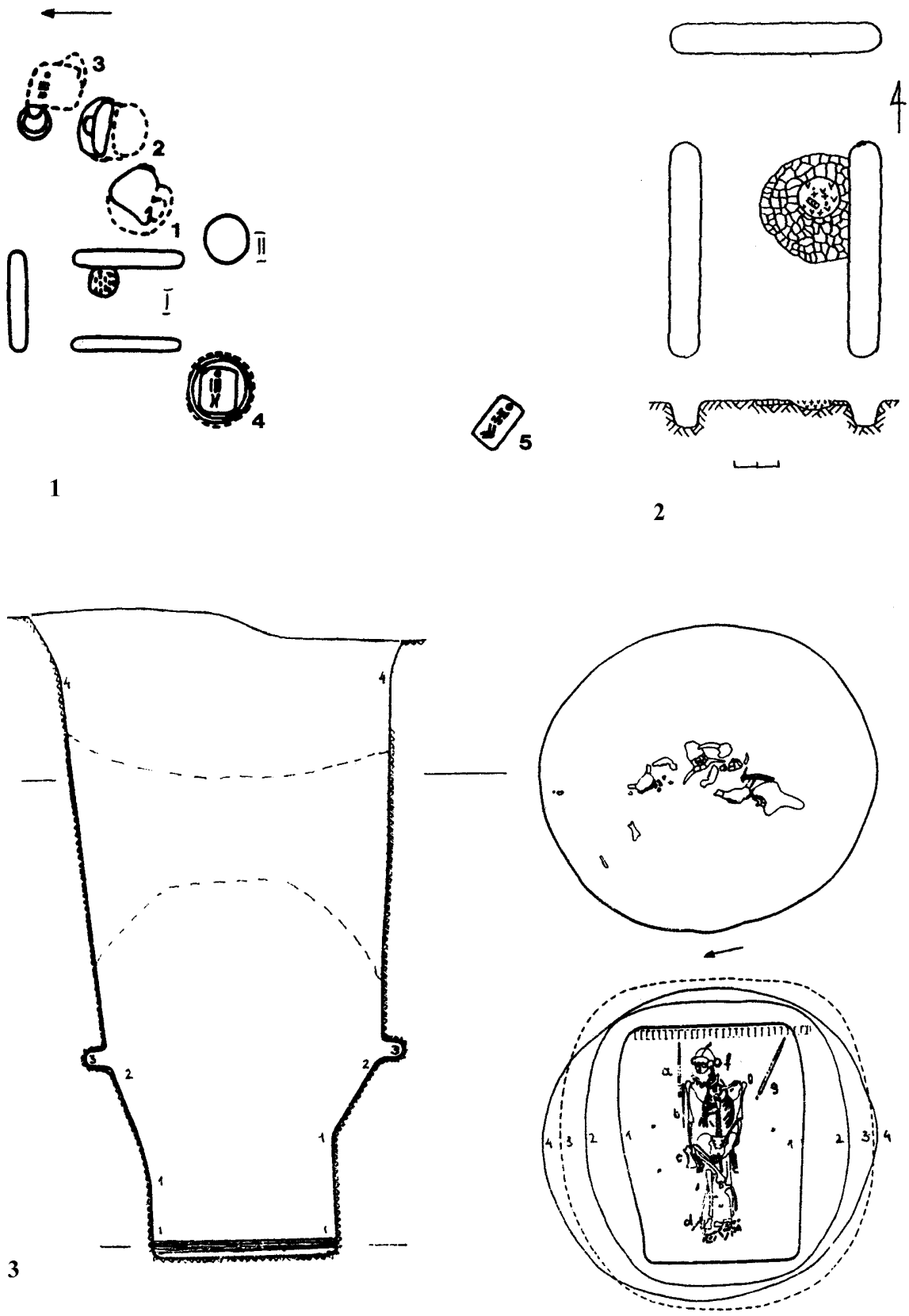


Fig. 104. Giurgiulesti cemetery

1 - general plan; 2 - ritual construction; 3 - burial 4 (after Haheu, Kurciatov 1993; Dergacev 2002).

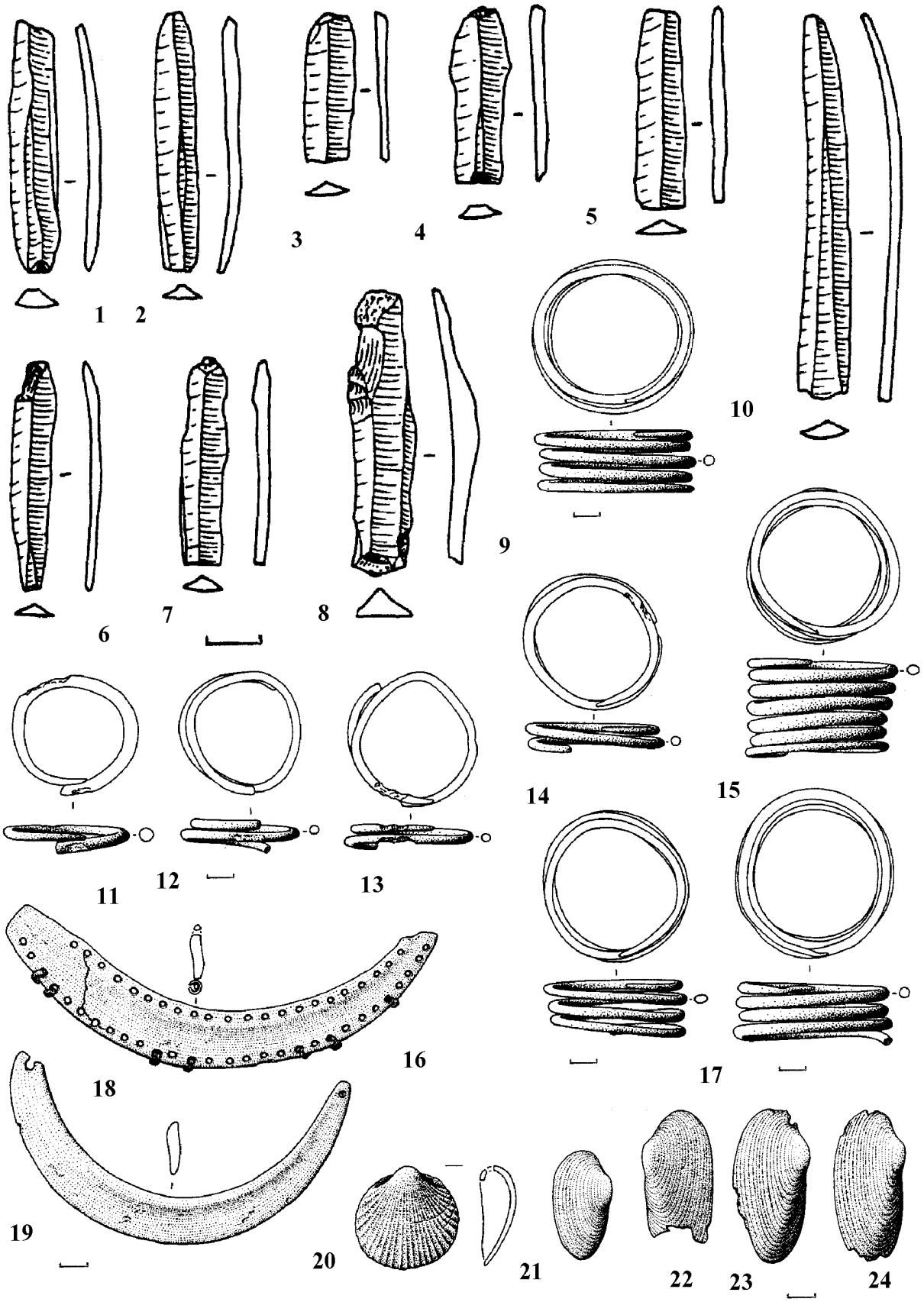


Fig. 105. Grave goods of burial 1 from Giurgiulesti cemetery (after Haheu, Kurciatov 1993; Dergacev 2002).
9,11-17 - copper; 18,19 - boar fang; 20-24 - shell.

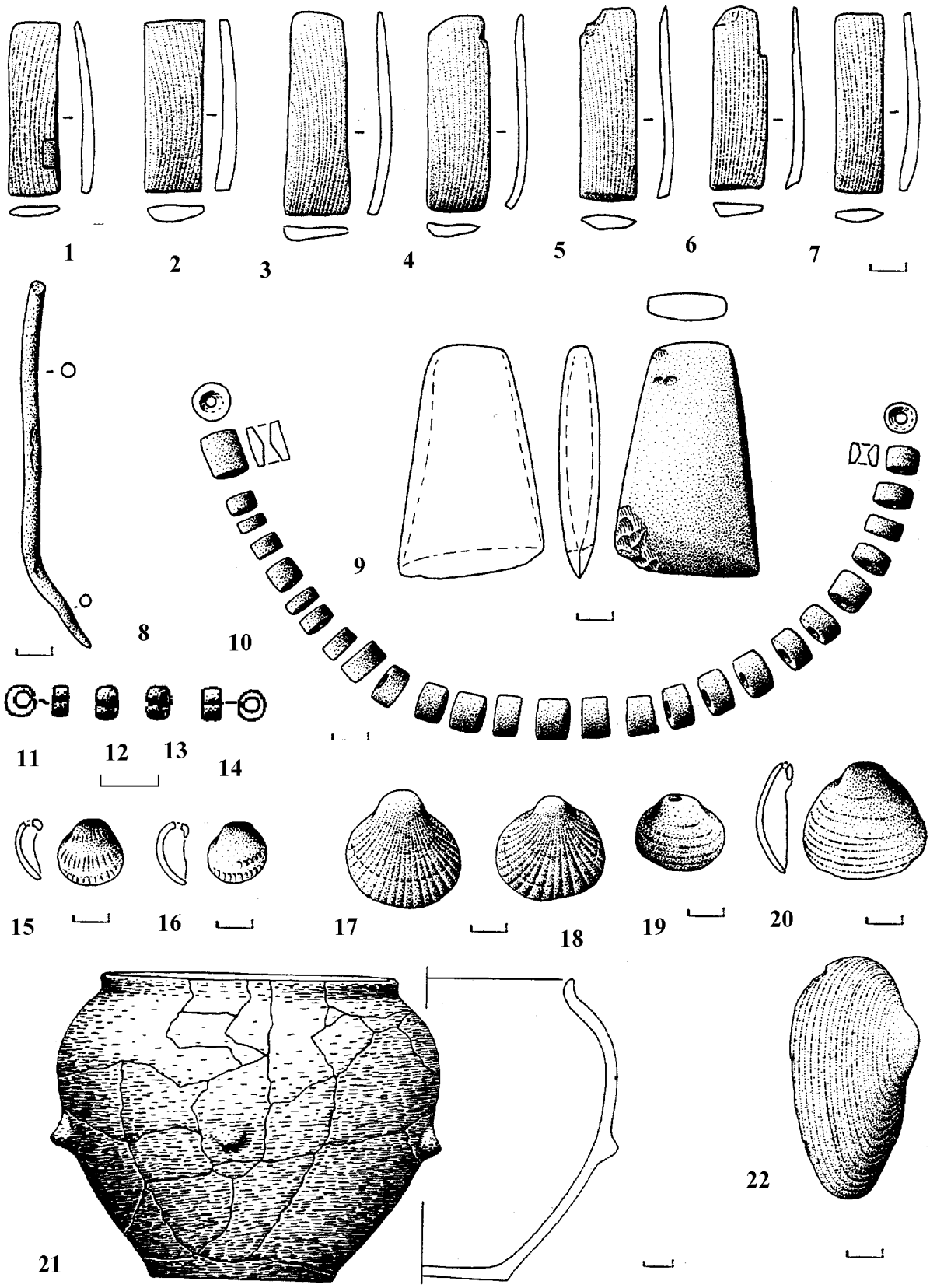


Fig. 106. Grave goods of burial 2 from Giurgiulesti cemetery (after Haheu, Kurciatov 1993; Dergacev 2002). 1-7;15-20 - shell; 8,11-14 - copper; 10 - limestone.

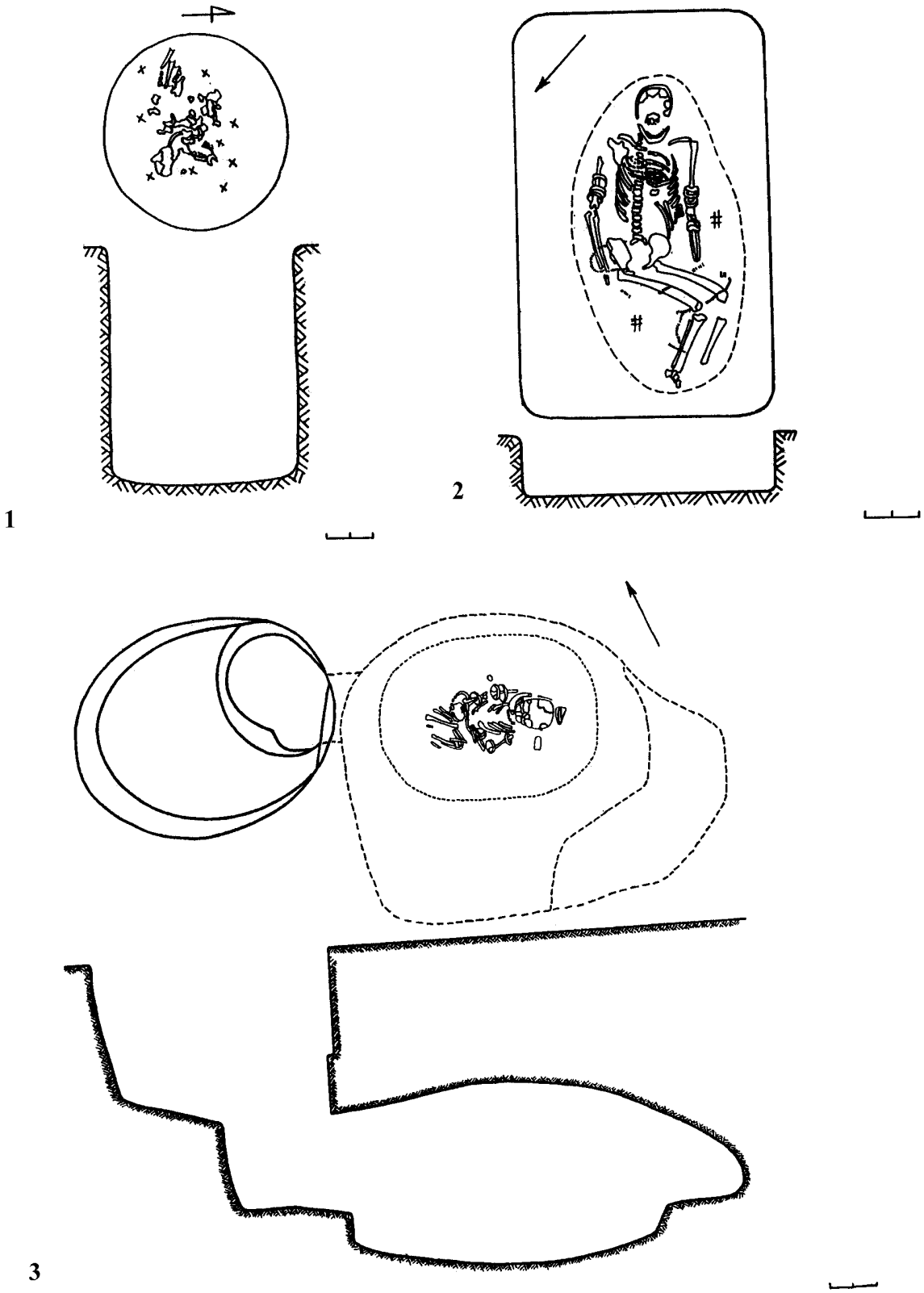


Fig. 107. Giurgiulesti cemetery

1 - ritual pit; 2 - burial 5; 3 - burial 3.
(after Haheu, Kurciatov 1993; Dergacev 2002).

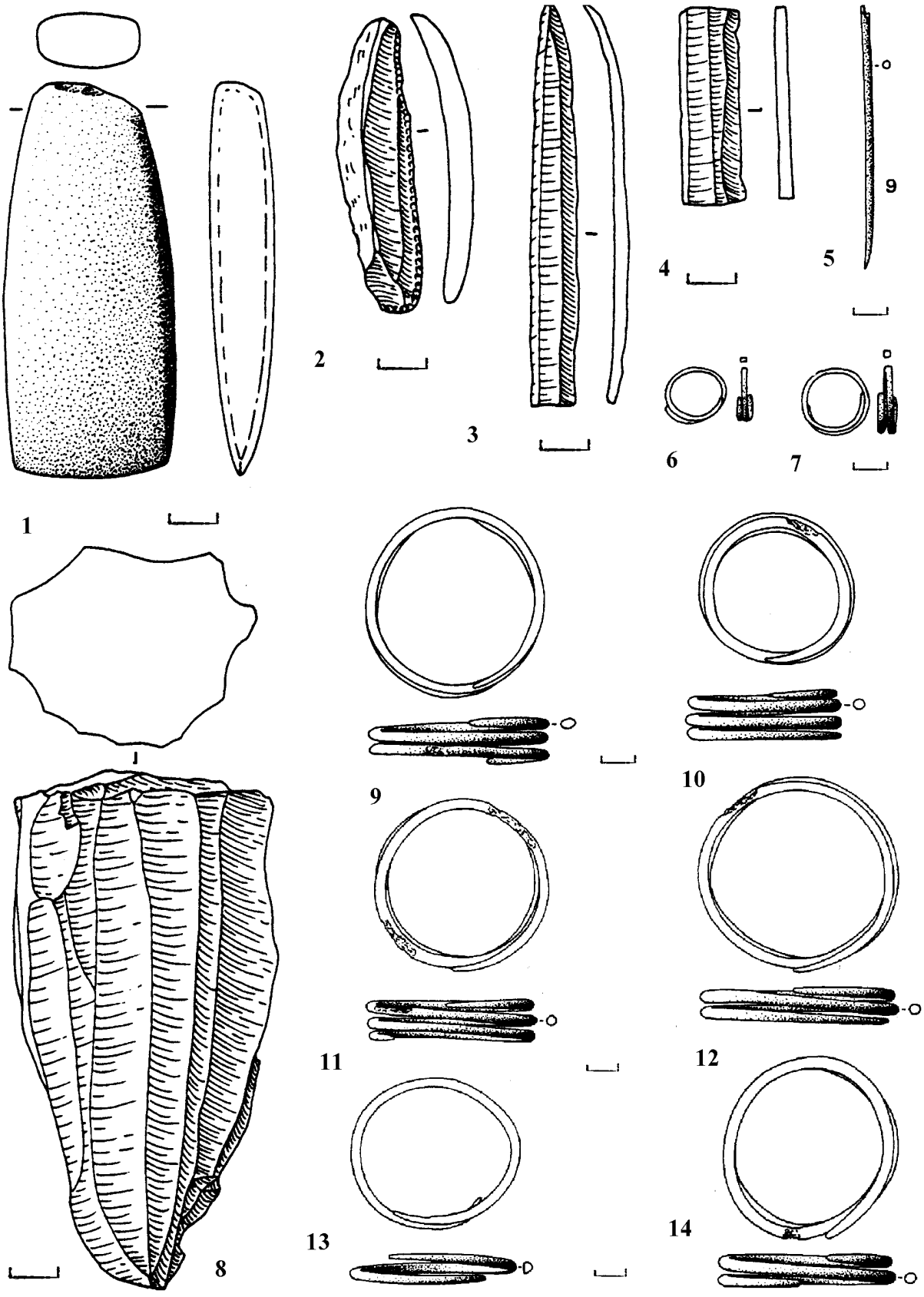


Fig. 108. Grave goods of burial 3 from Giurgiulesti cemetery (after Haheu, Kurciatov 1993; Dergacev 2002). 6,7,9-14 - copper.

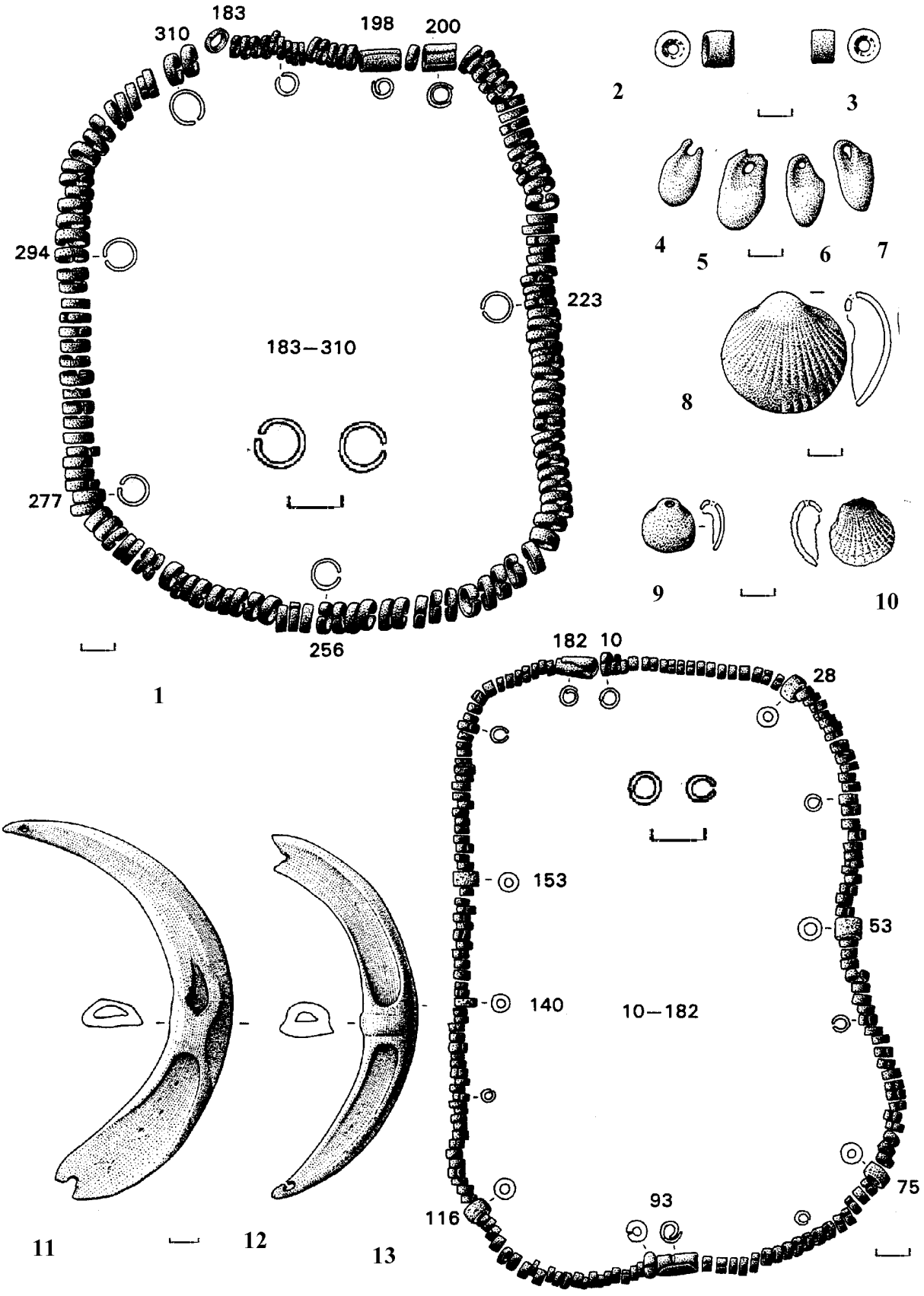


Fig. 109. Grave goods of burial 3 from Giurgiulesti cemetery
(after Haheu, Kurciatov 1993; Dergacev 2002)
1,13 - copper; 2,3 - limestone; 8-10 - shell.

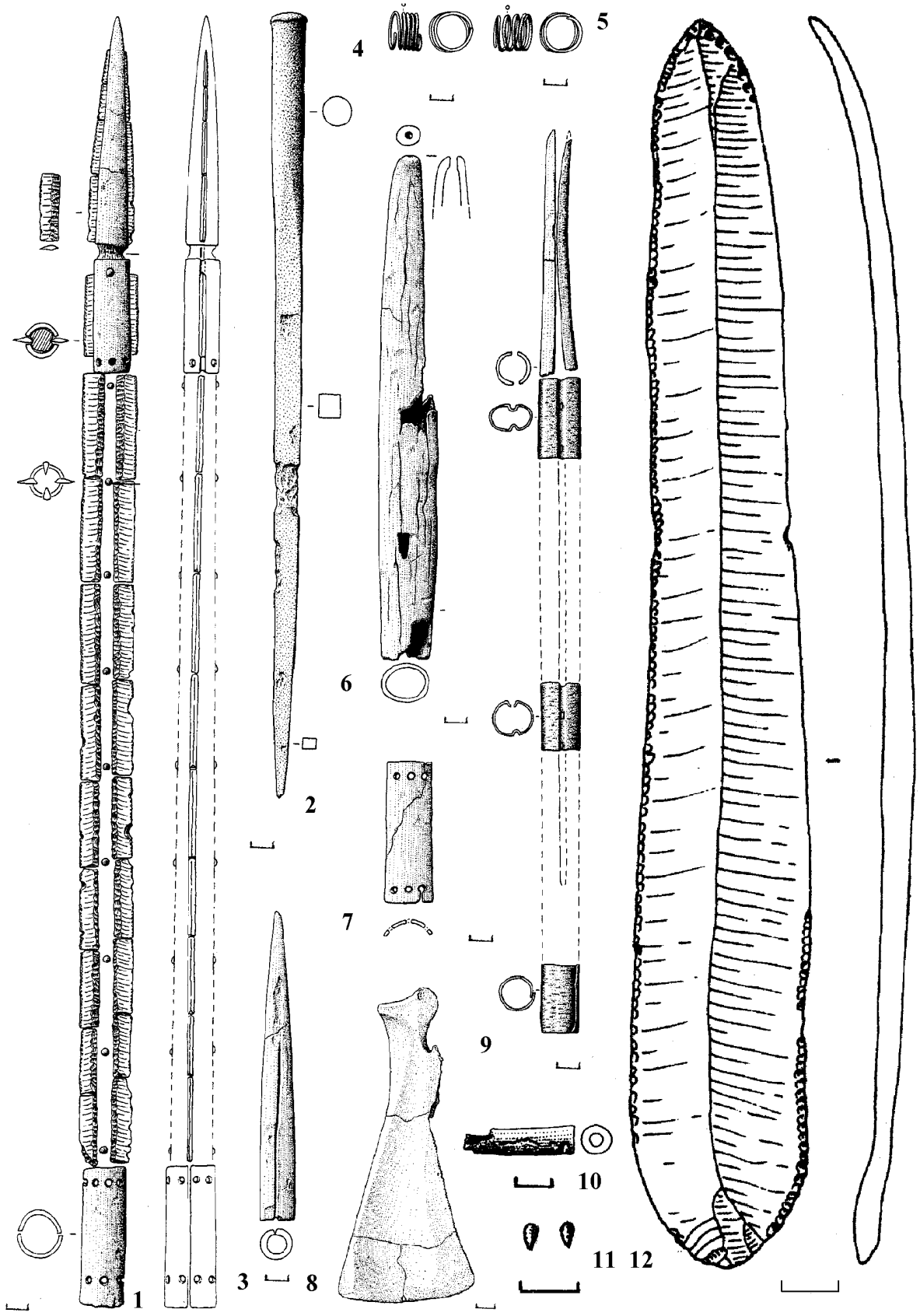


Fig. 110. Grave goods of burial 4 from Giurgiulesti cemetery (after Haheu, Kurciatov 1993; Dergacev 2002). 2,10 - copper; 4,5 - gold.

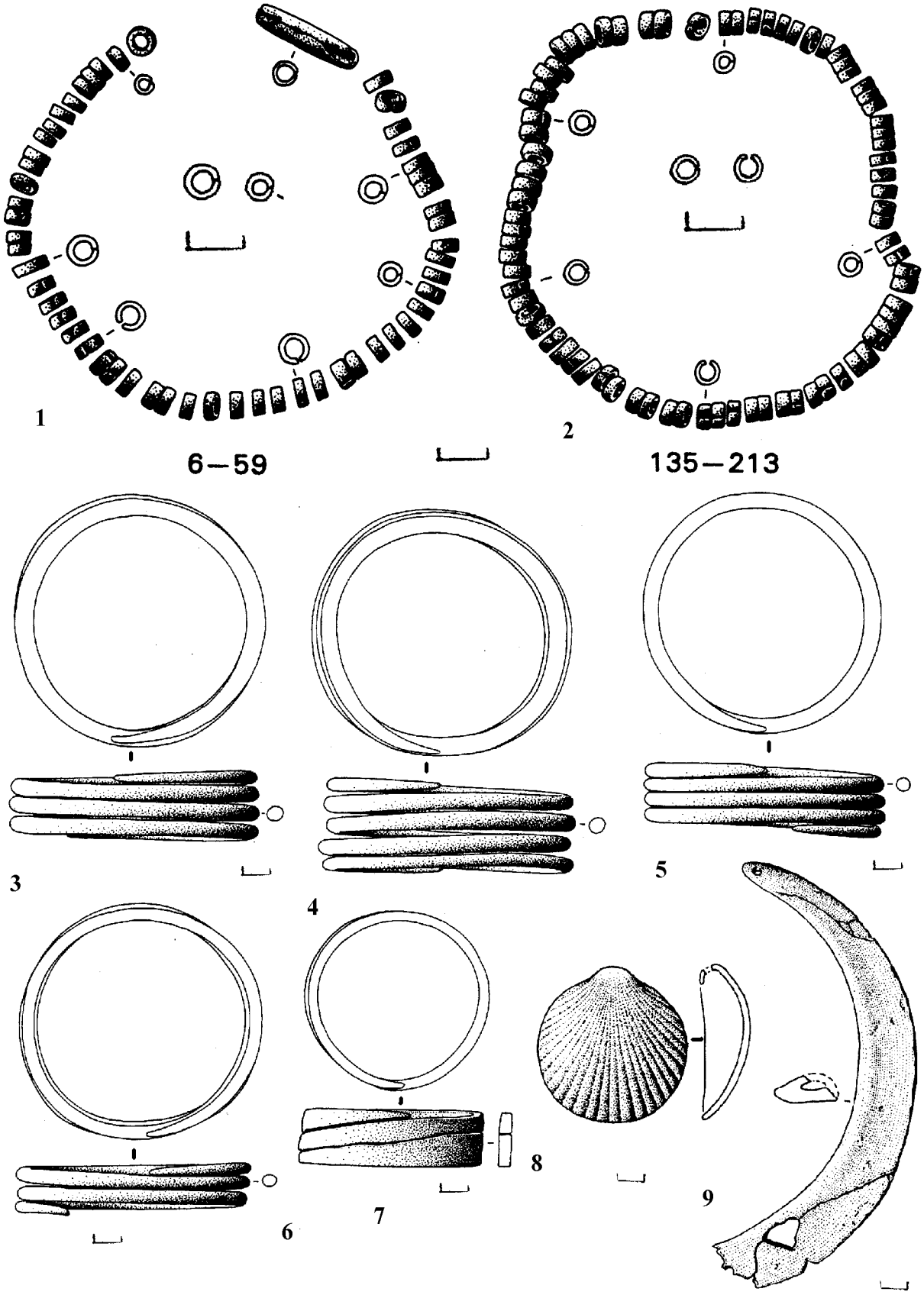


Fig. 111. Grave goods of burial 5 from Giurgiulesti cemetery (after Haheu, Kurciatov 1993; Dergacev 2002).
1-7 - copper; 8 - shell; 9 - boar fang.

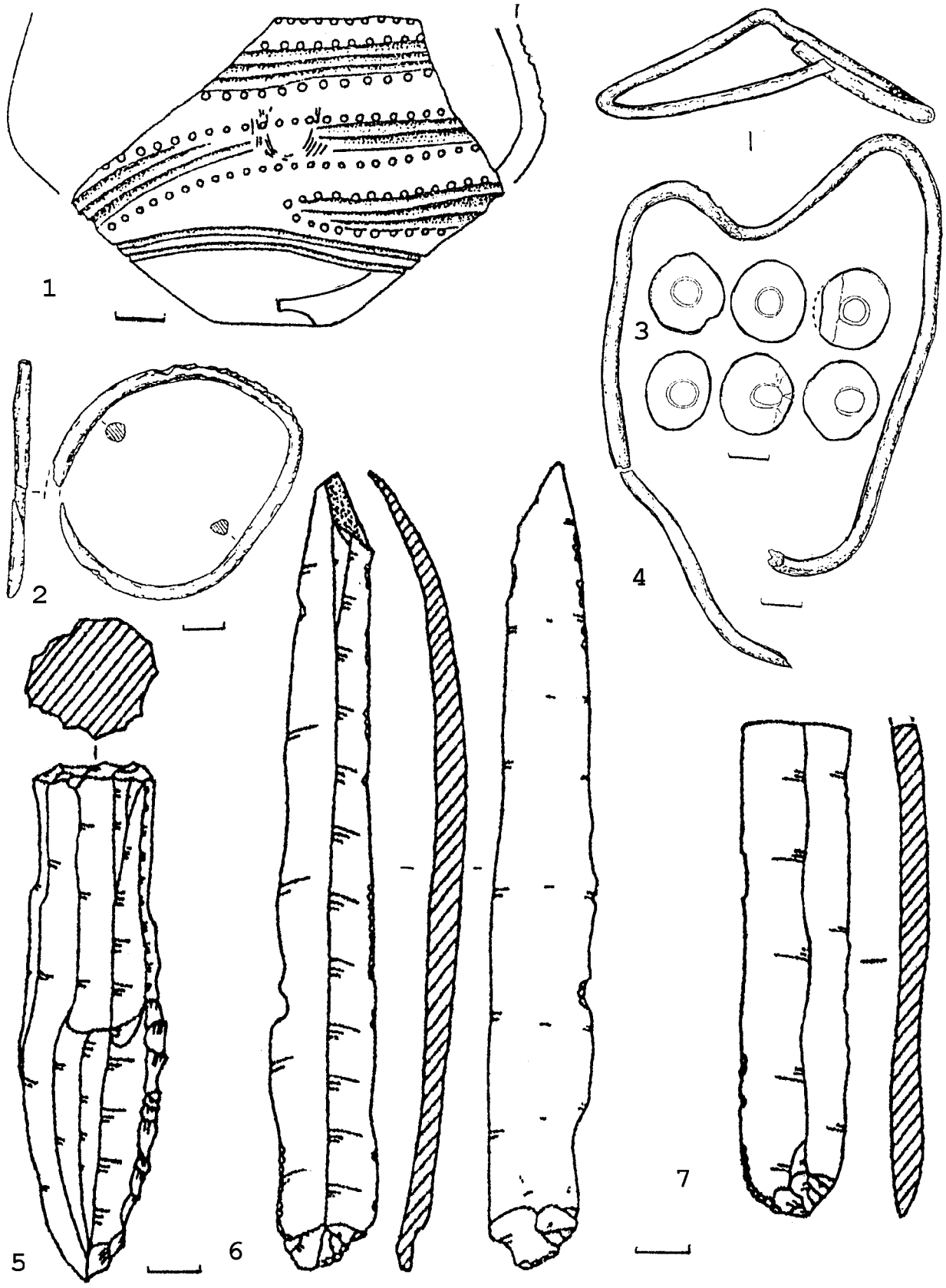


Fig. 112. Grave goods of burial from Kainary (after Мовша, Чеботаренко 1969). 2,4 - copper; 3 - shell.

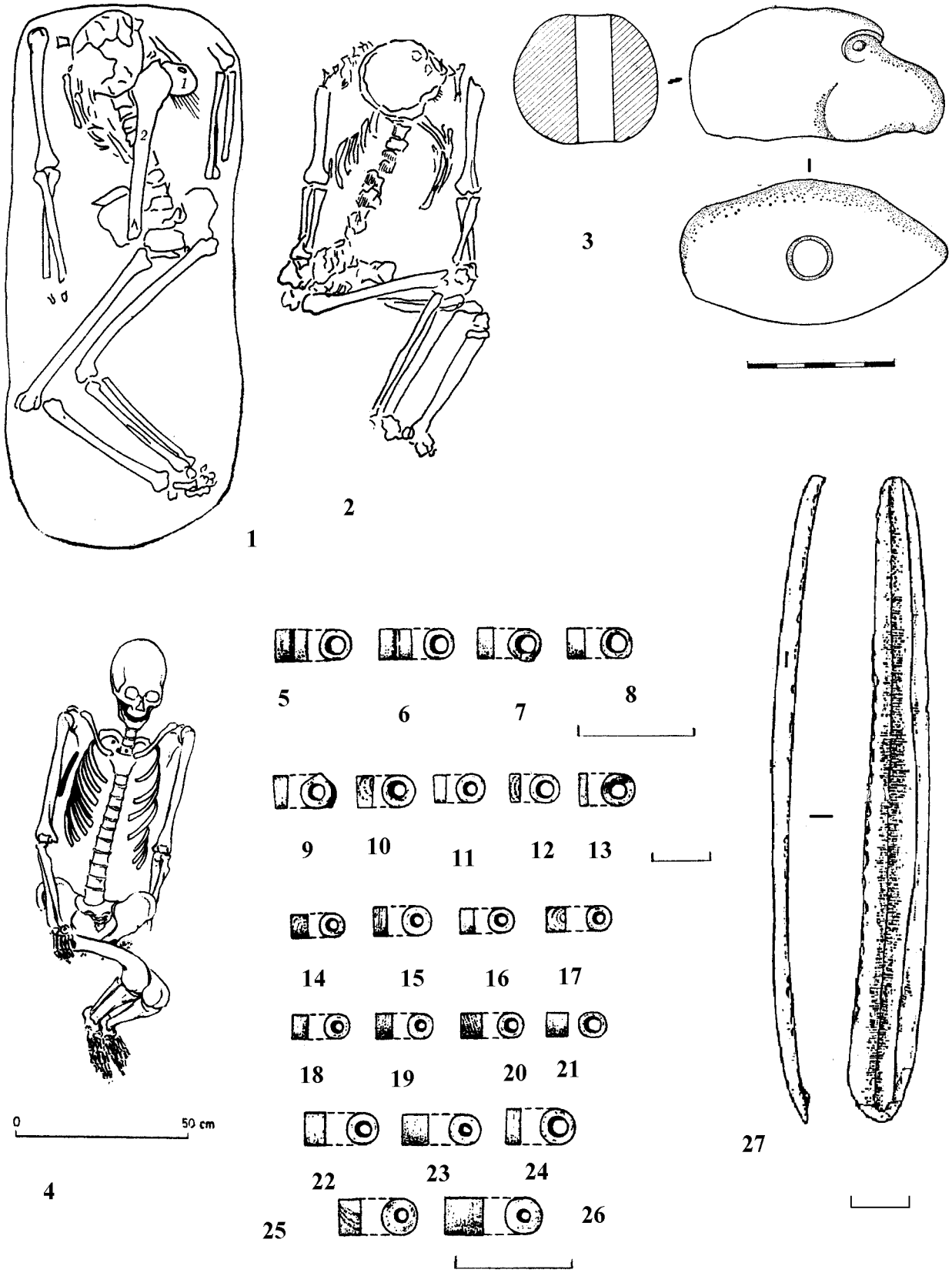


Fig. 113. Burials of the Sredniy Stog culture

1,3 - Kulevcha, burial 33; 2 - Kulevcha, burial 27; 4-27 - Chongrad (1-3 - after Vazarova 1986; 4-27 - after Телегин et al. 2001).

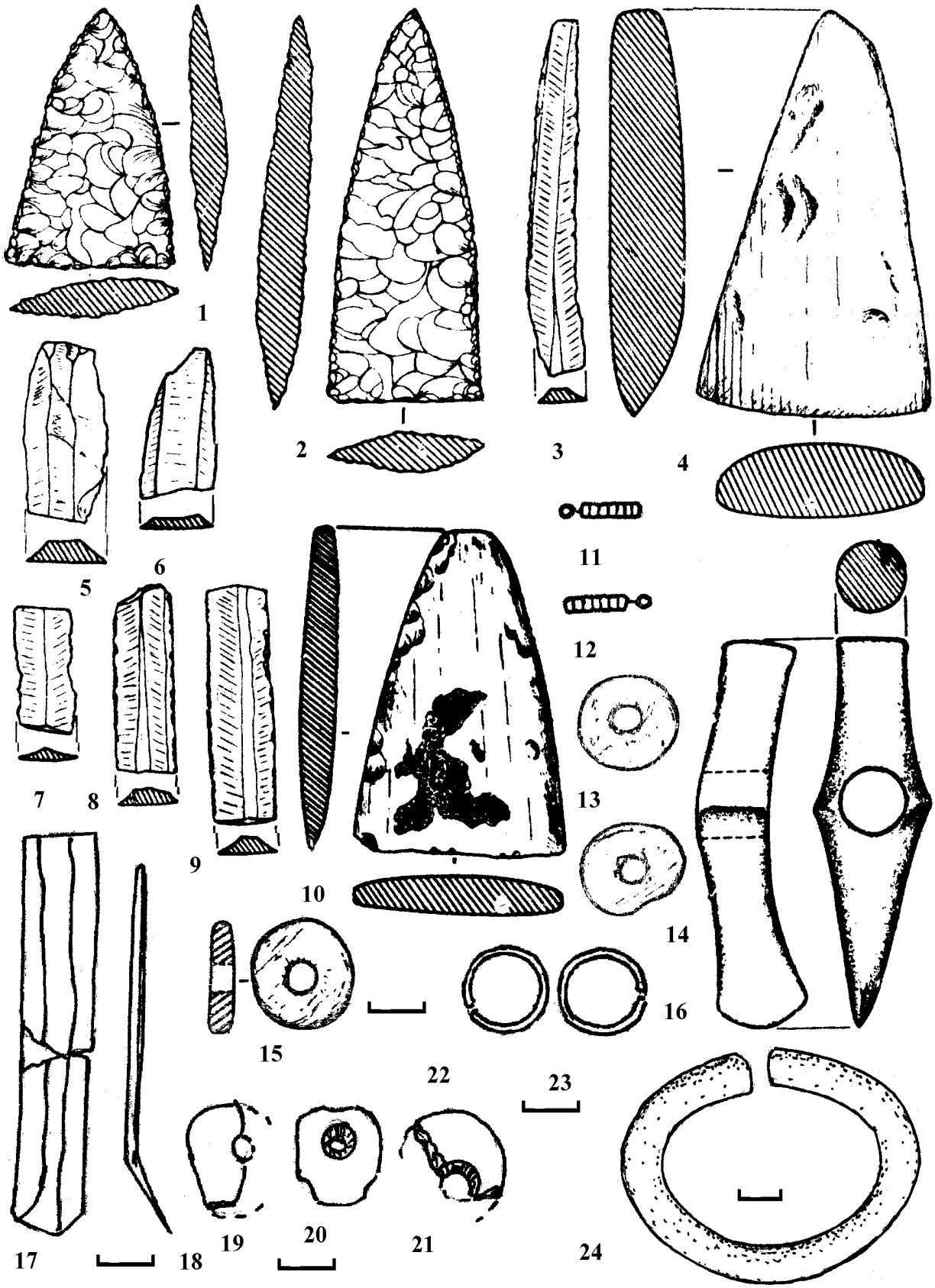


Fig. 114. Grave goods from the Sredniy Stog culture burials 1-10,16 - Falciu, burial 1; 11-15 - Falciu, burial 2; 17-24- Lugoch (1-16 - after Poposoi 1994 and Рындина 1998; 17-24 - after Rassamakin 2004). 11,12,16,18 - copper; 13-15,19-21 - shell; 22-24 - gold.

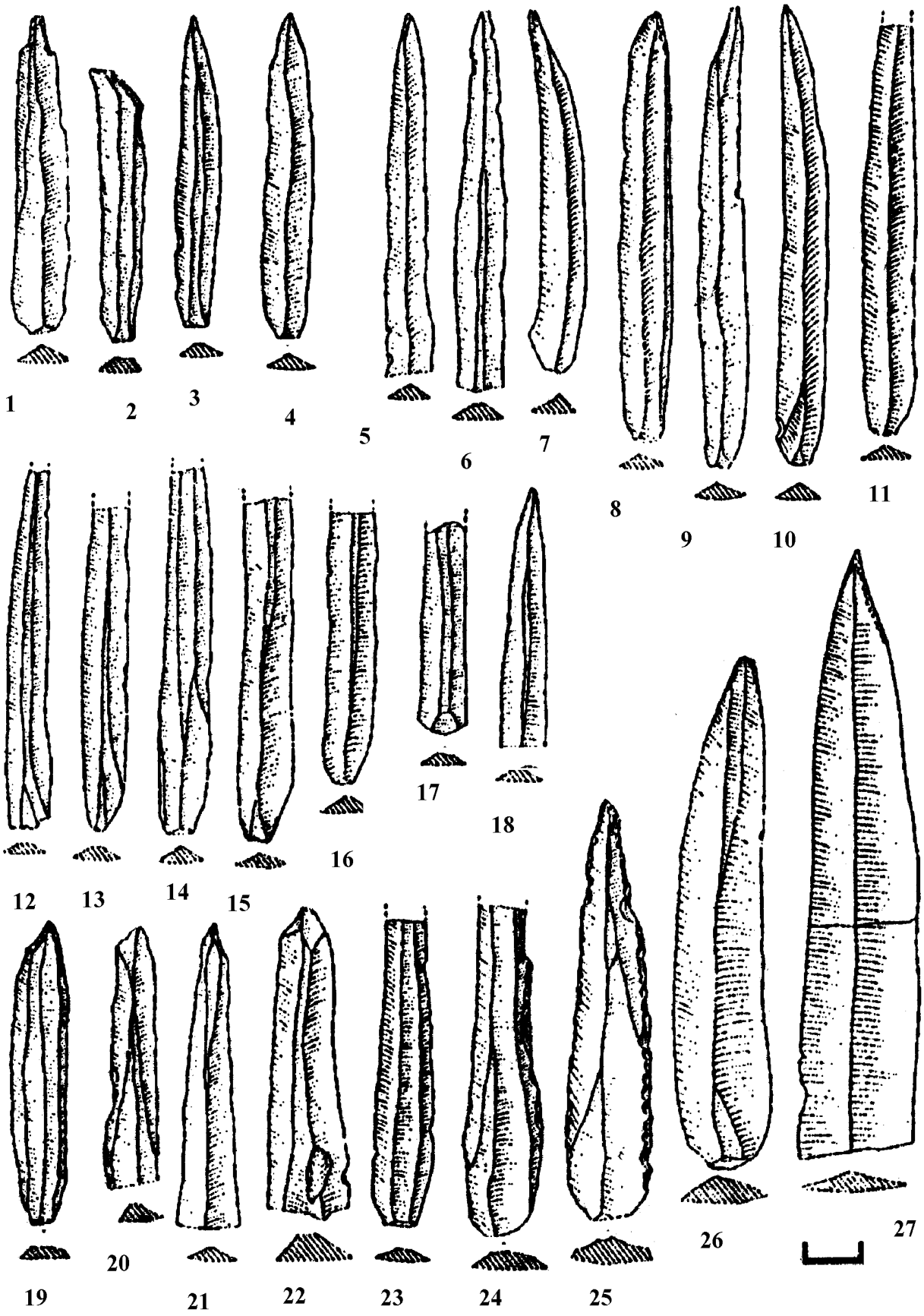


Fig. 115. Grave goods of burial from Reka Devnja (after Мирчев 1961; Телегин et al. 2001).

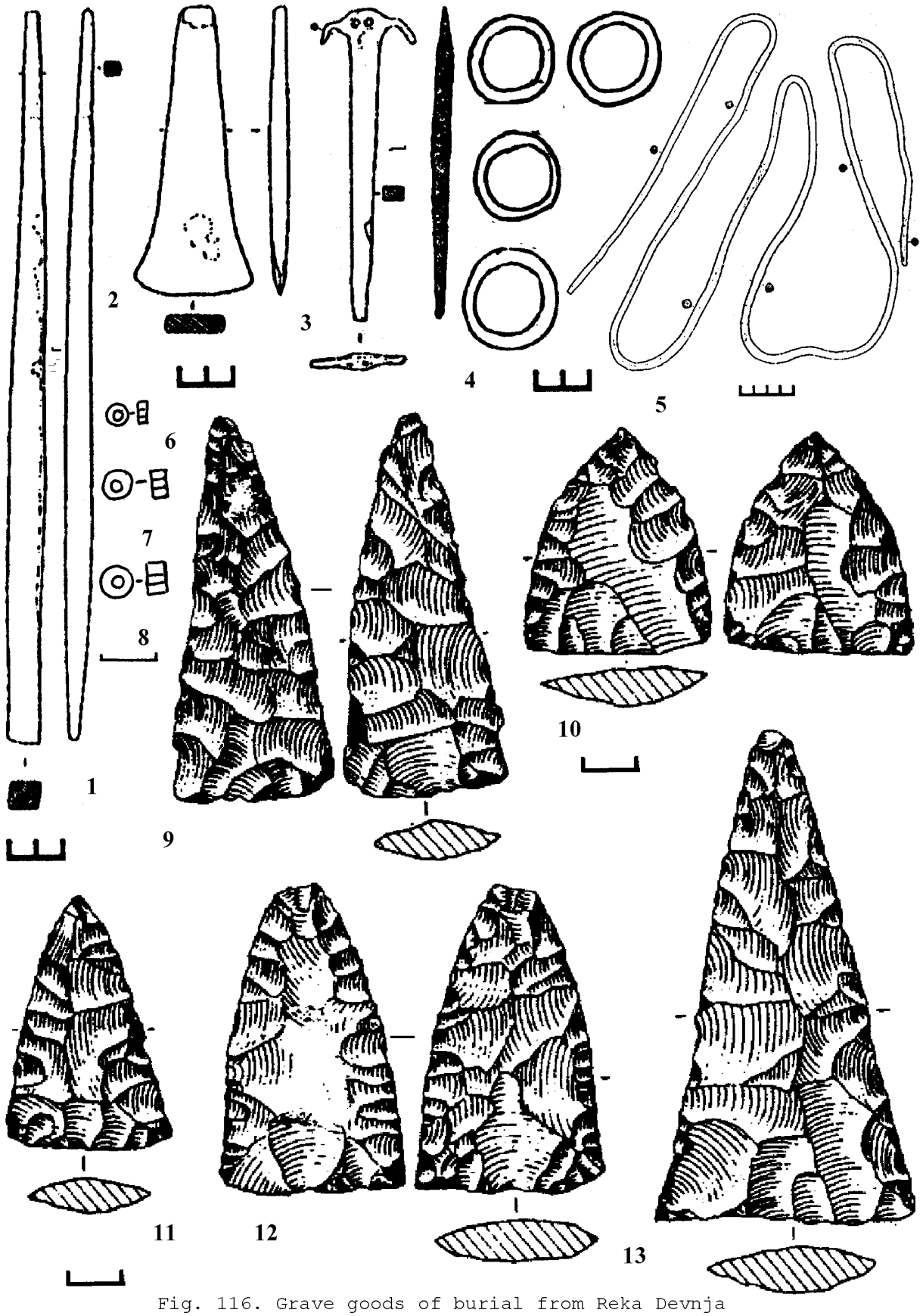


Fig. 116. Grave goods of burial from Reka Devnja (after Мирчев 1961; Телегин et al. 2001). 1-3,5-7 - copper; 4 - gold; 8 - nacre.

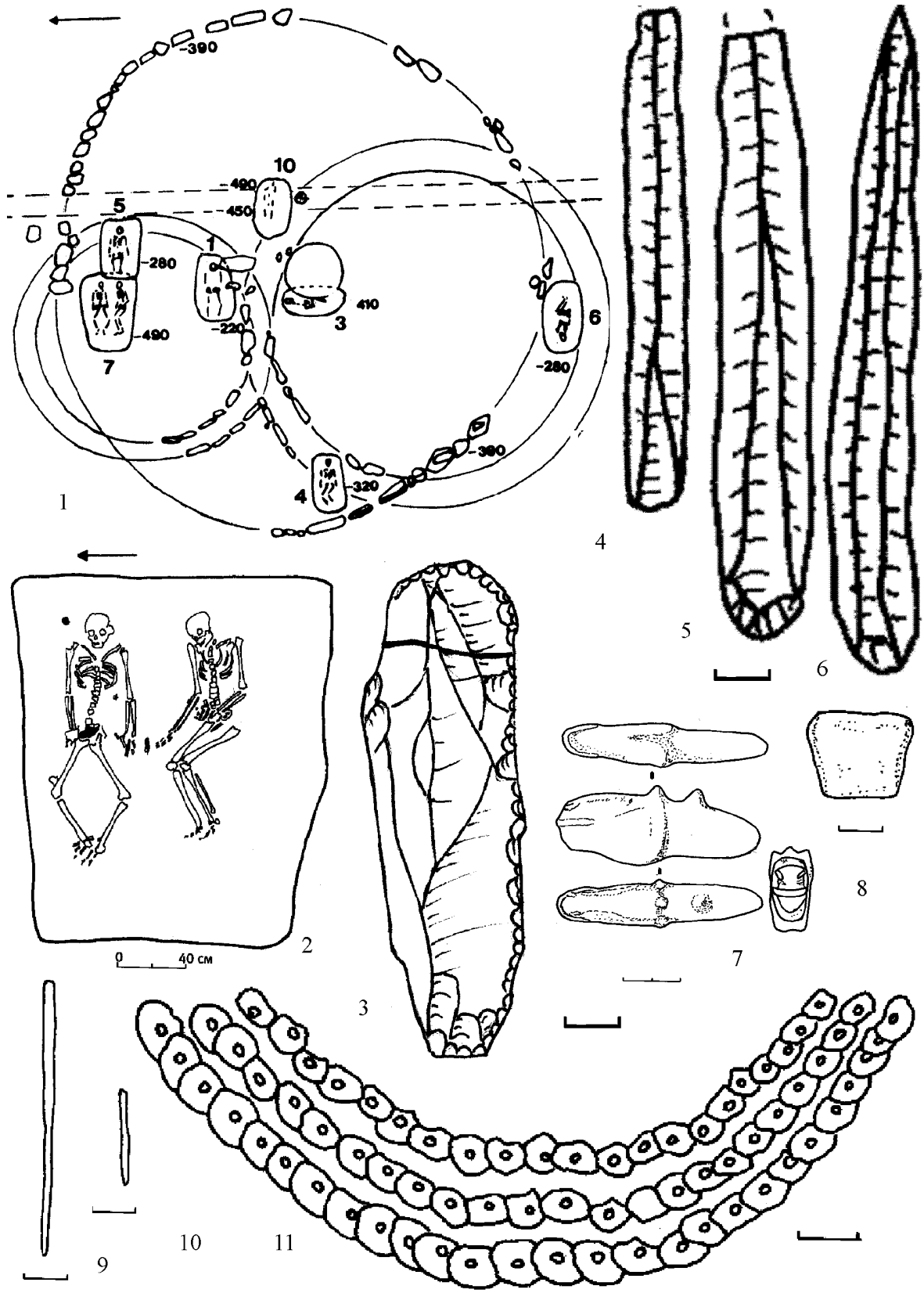


Fig. 117. Suvorovo, kurgan 1 burial 7

1 - plan of burial location; 2 - plan of burial; 3-11 - grave goods (1 - after Алексеева 1992; 2,4-11 - after Rassamakin 2004; 3 - drawing of photo from field report Шмаглия et al. 1970). 7,8 - stone; 9,10 - copper; 11 - nacre.

CEMETERIES

SETTLEMENTS

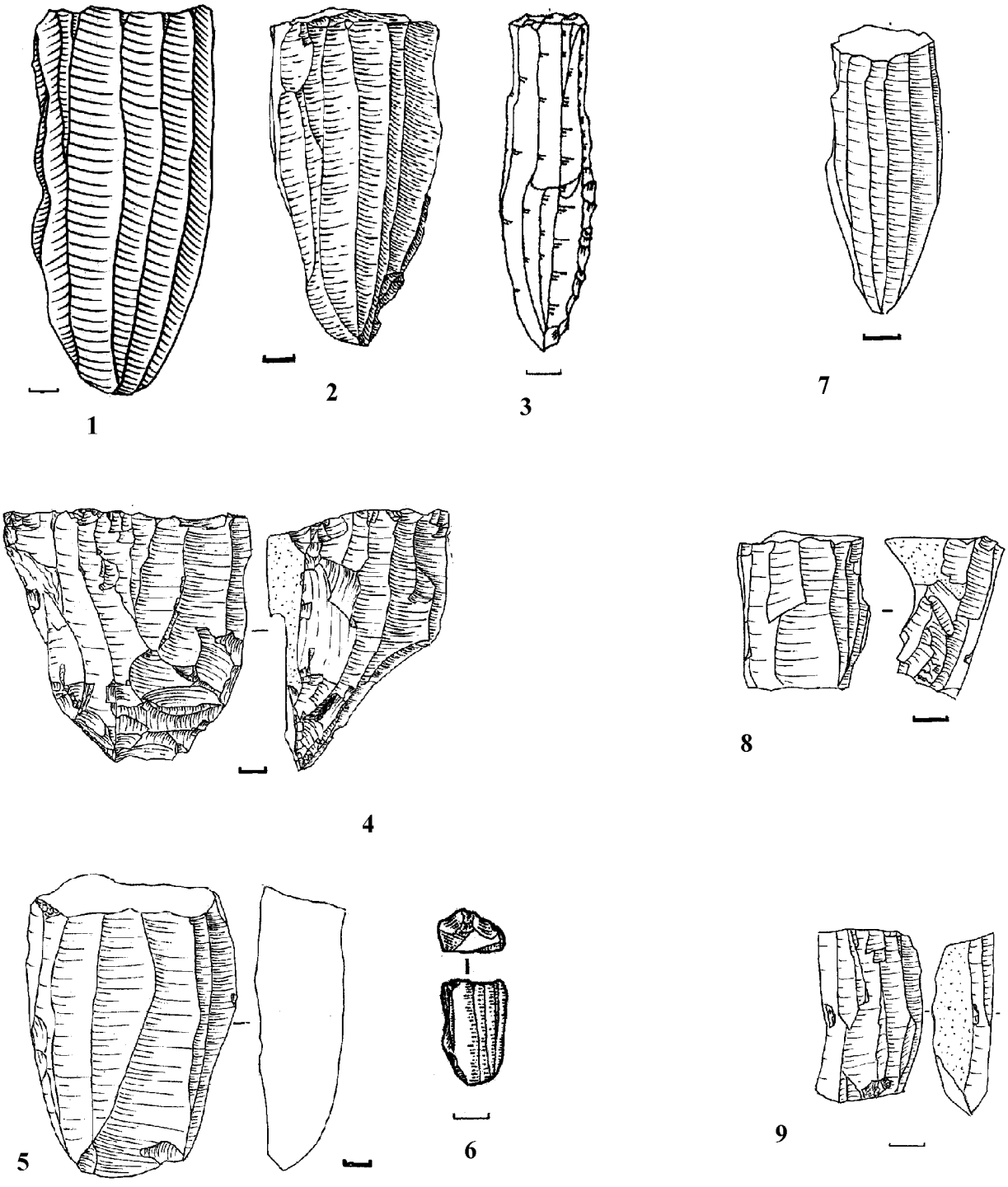


Fig. 118. Comparison of cores from cemeteries and settlements

1 - Yama; 2 - Giurgiulesti; 3 - Kainary; 4,5 - Chapli;
6 - Tuzluki; 7-9 - Razdolnoe.

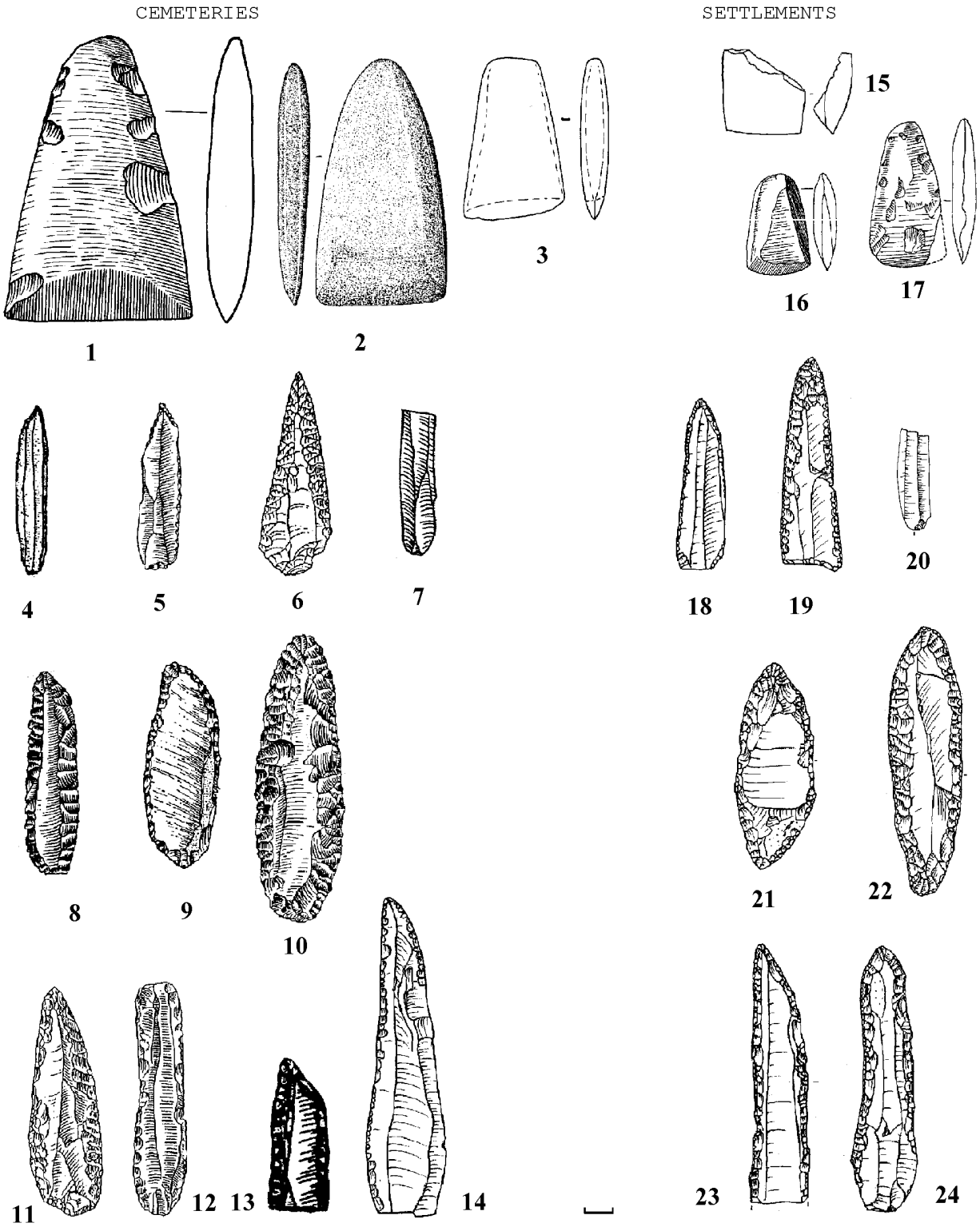


Fig. 119. Comparison of axes and blades from cemeteries and settlements

1- Yama; 2 - Lugansk; 3 - Giurgiulesti ; 4 - Reka Devnja; 5,8,10 - Petro-Svistunovo; 6,11,12 - Igren; 7 - Alexandrovsk; 9 - Krivoy Rog; 13 - Veselaja Roscha; 14 - Mariupol; 15,18,21,23,24 - Strilcha Skelja; 16,17 - Razdorskoe; 19,22 - Sredniy Stog; 20 - Semenovka.

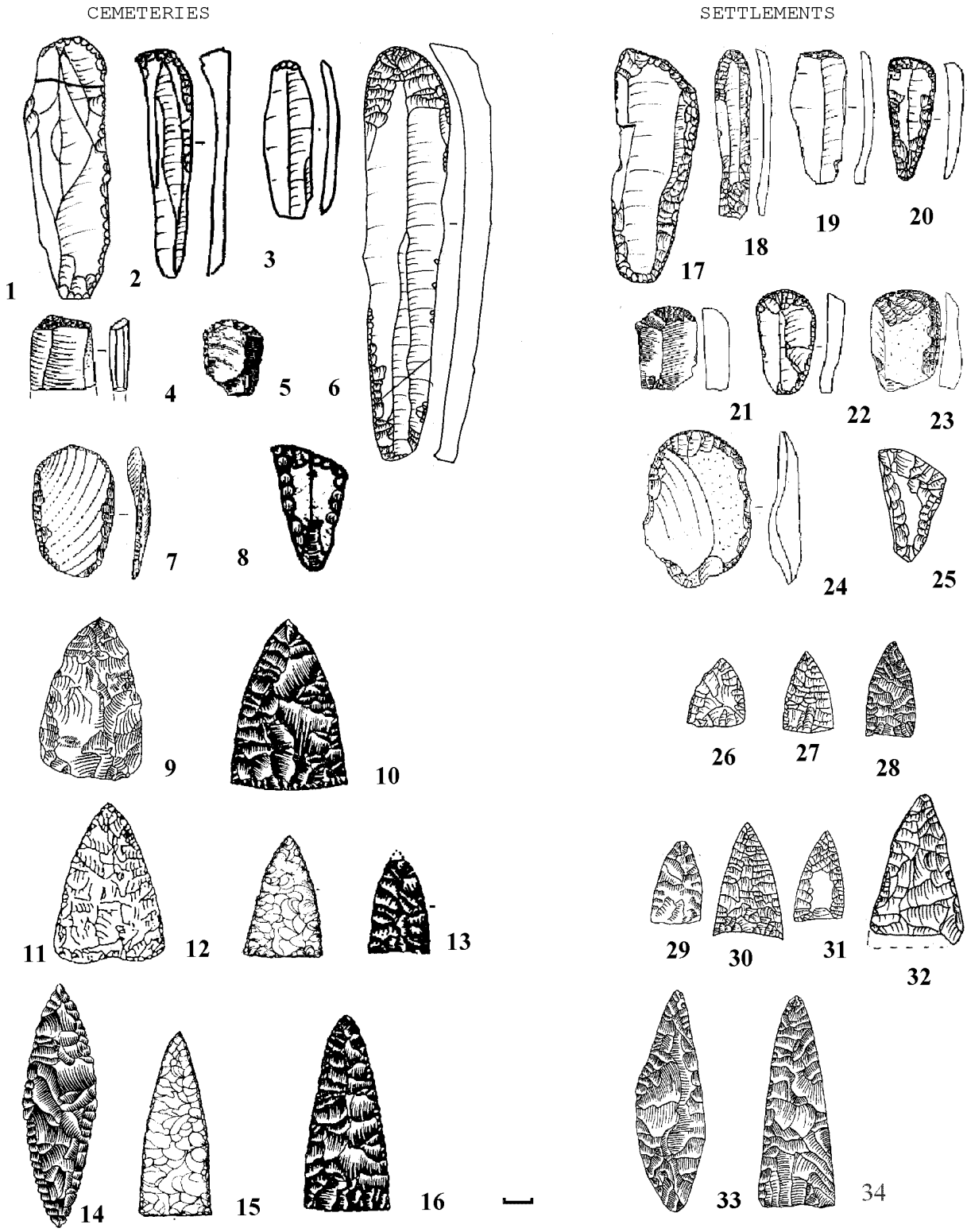


Fig. 120. Comparison of scrapers and points from cemeteries and settlements

1 - Suvorovo; 2,3 - Komarovo; 4 - Staronizhesteblievskaja; 5 - Decea Muresului; 6 - Alexandrovsk; 7,9 - Igren; 8 - Veselaja Roscha; 10,14,16 - Petro-Svistunovo; 11 - Krivoy Rog; 12,15 - Falciu; 13 - Krasnogorovka; 17,18,22,25-27,30,31 - Sredniy Stog; 19,20,23,24 - Razdolnoe; 21,28,29,33, 34 - Razdorskoe; 32 - Strilcha Skelja.

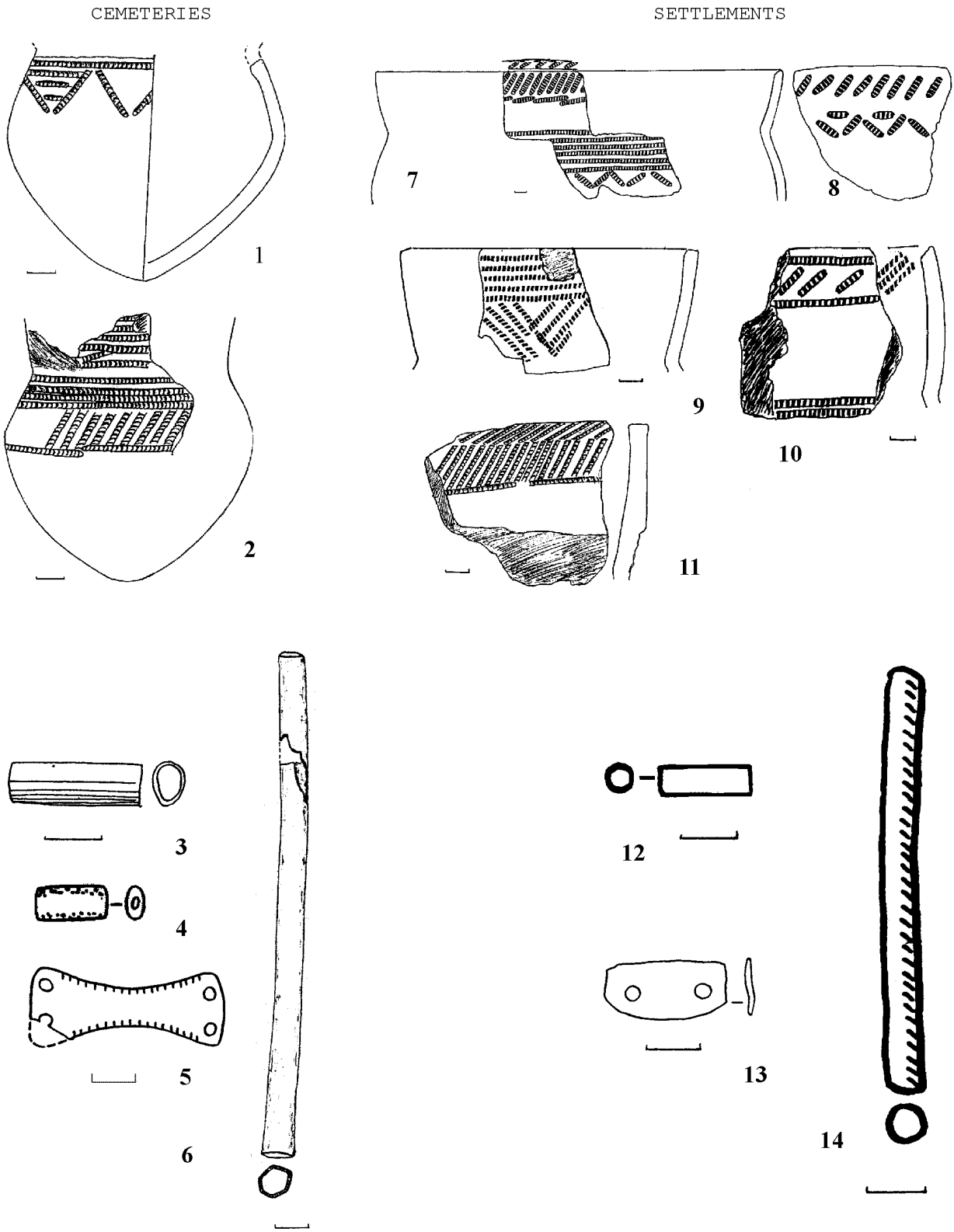


Fig. 121. Comparison of materials from cemeteries and settlements

1,2 - Igren; 3 - Karataevo; 4,5 - Staronizhesteblievskaja; 6 - Lugansk; 7,8,11 - Sredniy Stog; 9 - Semenovka; 10 - Strilcha Skelja; 12-14 - Razdorskoe.

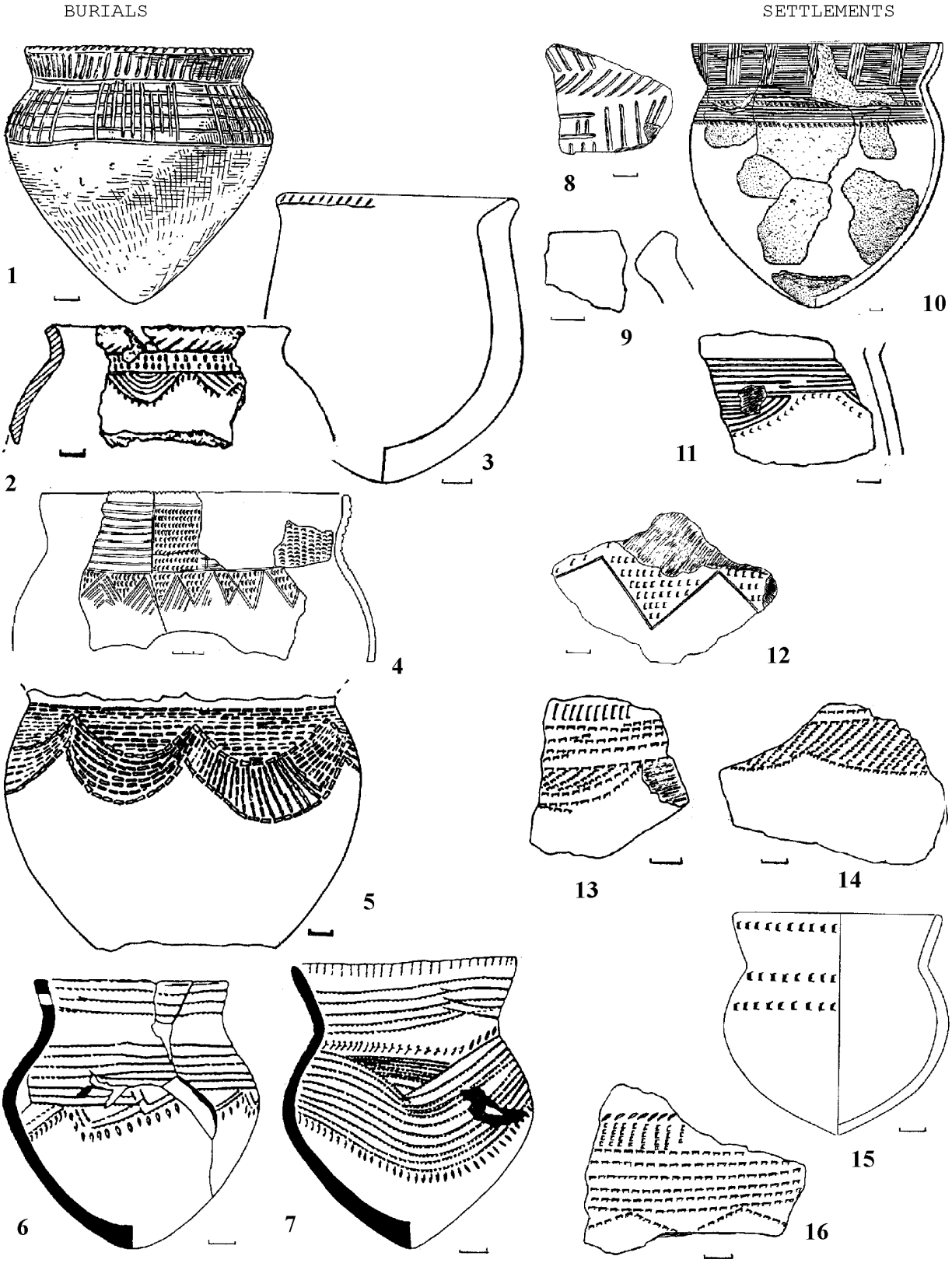


Fig. 122. Comparison of pottery from settlements and burials

1 - Popov; 2 - Tuzluki; 3 - Veselaja Roscha; 4 - Mokry Chaltyr;
5 - Semenkin; 6,7 - Mukhin 2; 8 - Razdolnoe; 9 - Razdorskoe;
10 - Serebrjanskoe; 11-14 - Strilcha Skelja; 15,16 - Sredniy Stog.

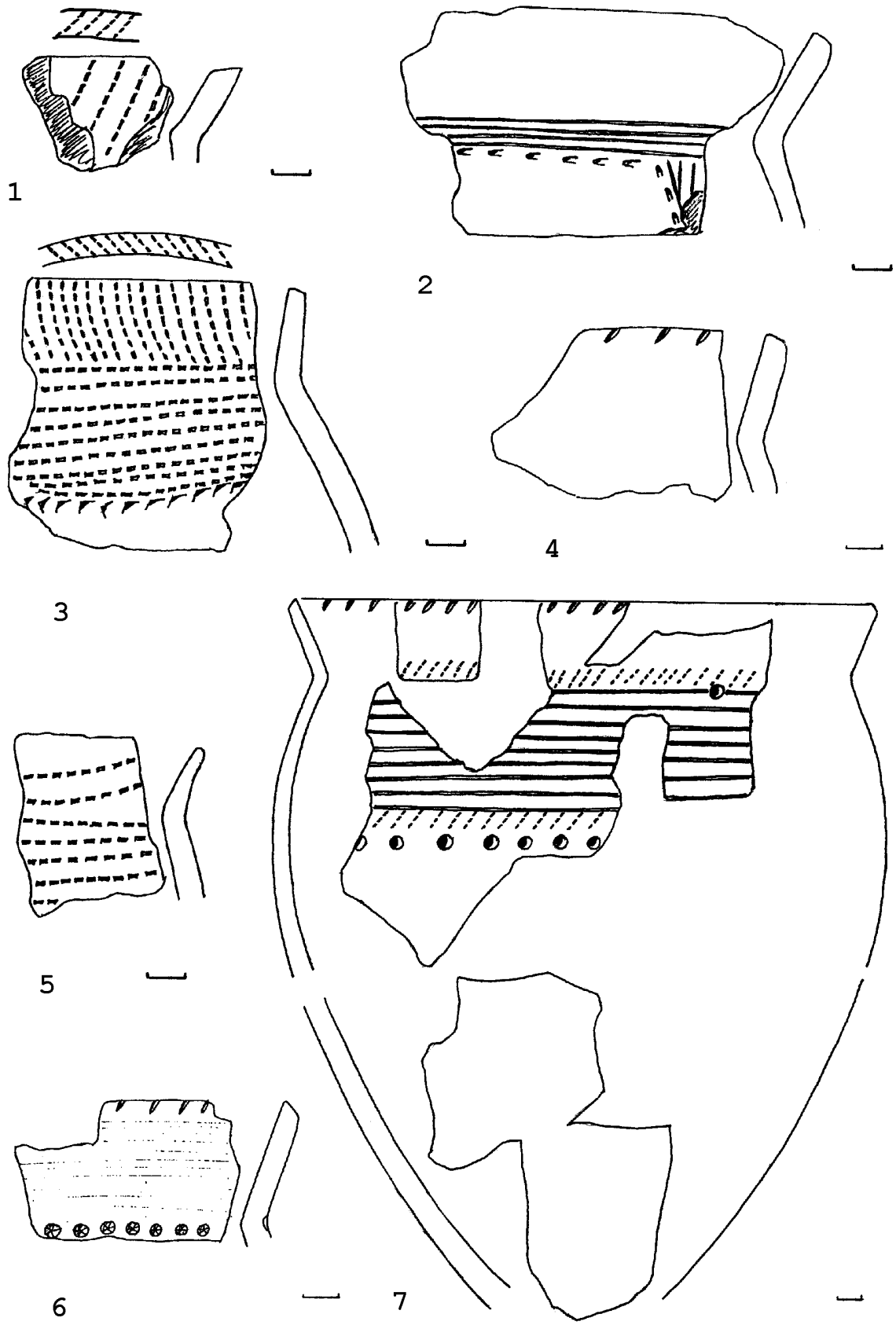


Fig. 123. Pottery of the Sredniy Stog culture from middle Don basin

1 - Kopanische 1; 2,3,5 - Cherkasskoe settlement; 4,6,7 - Universitetskoe 3 settlement.

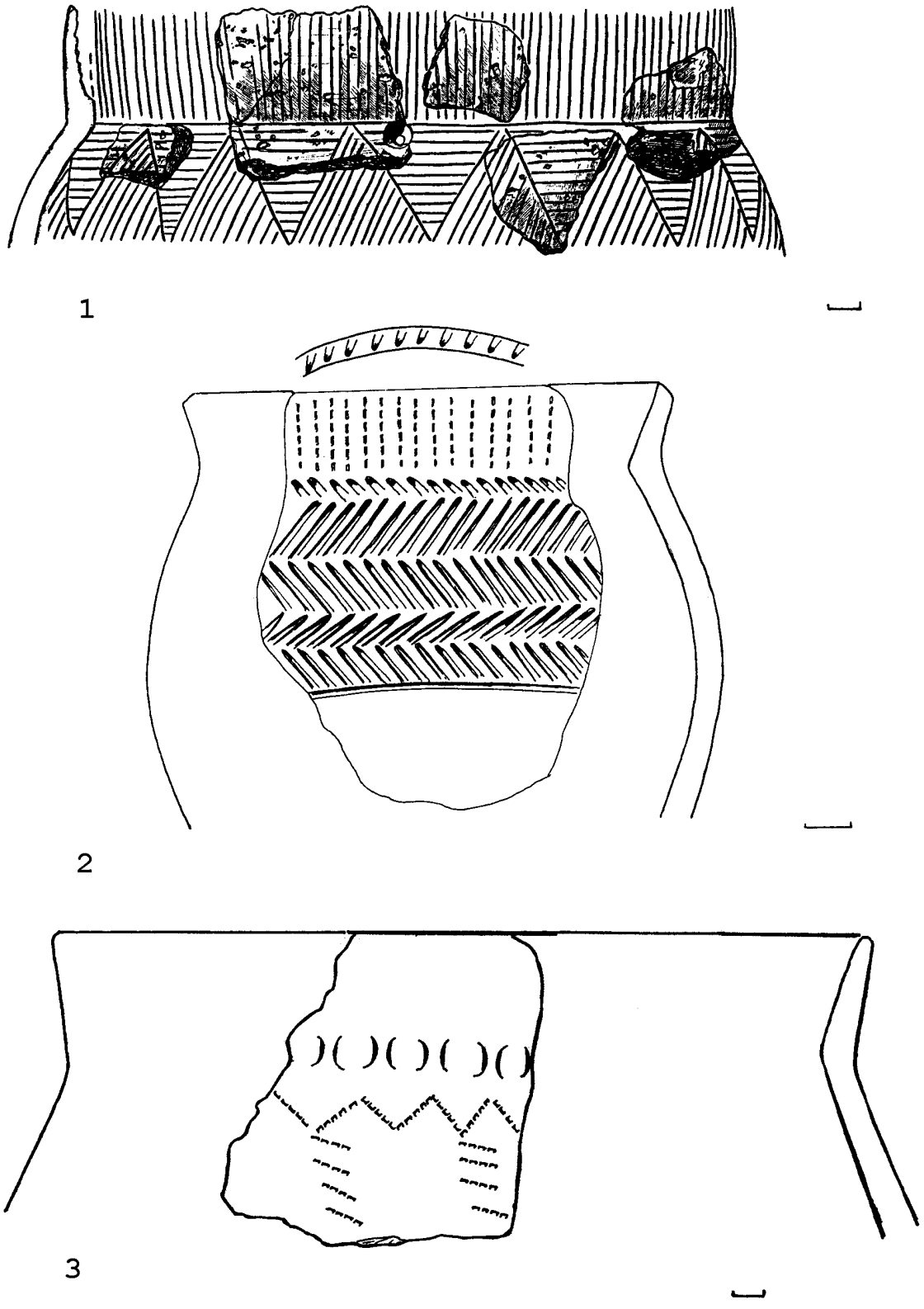


Fig. 124. Pottery of the Sredniy Stog culture from lower Don basin

1 - Samsonovka settlement (after Гей 1983); 2,3 - Tsimljanskoe settlement.

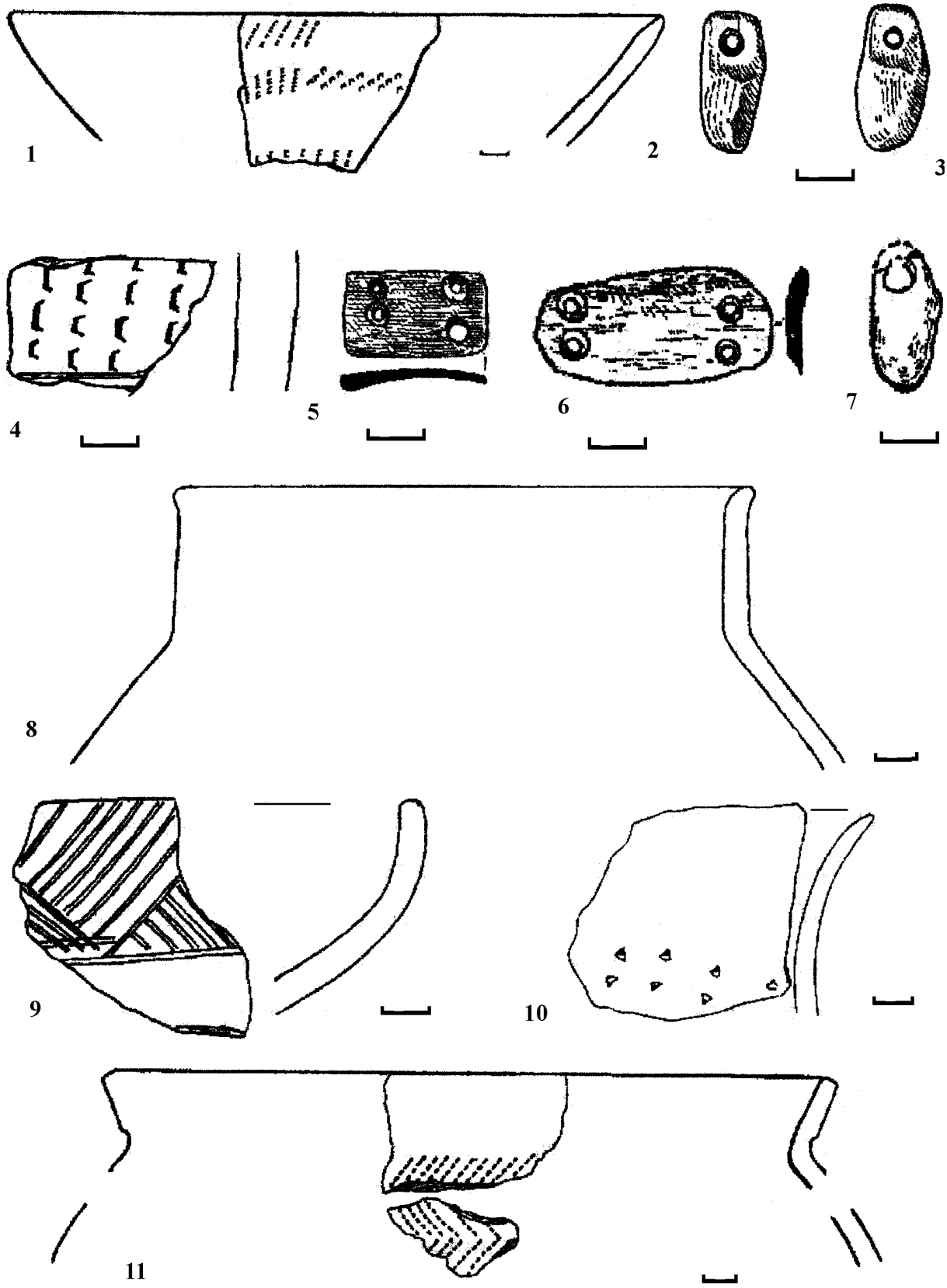


Fig. 125. Materials of the Tripolye culture (period A)

1,4,8 - Bernashevka; 2,3,9 - Sabatinovka 2; 5-7,10,11 - Luka-Brublevetskaja (2,3,5-7 - after Збенович 1989). 2,3,5-8 - bone.

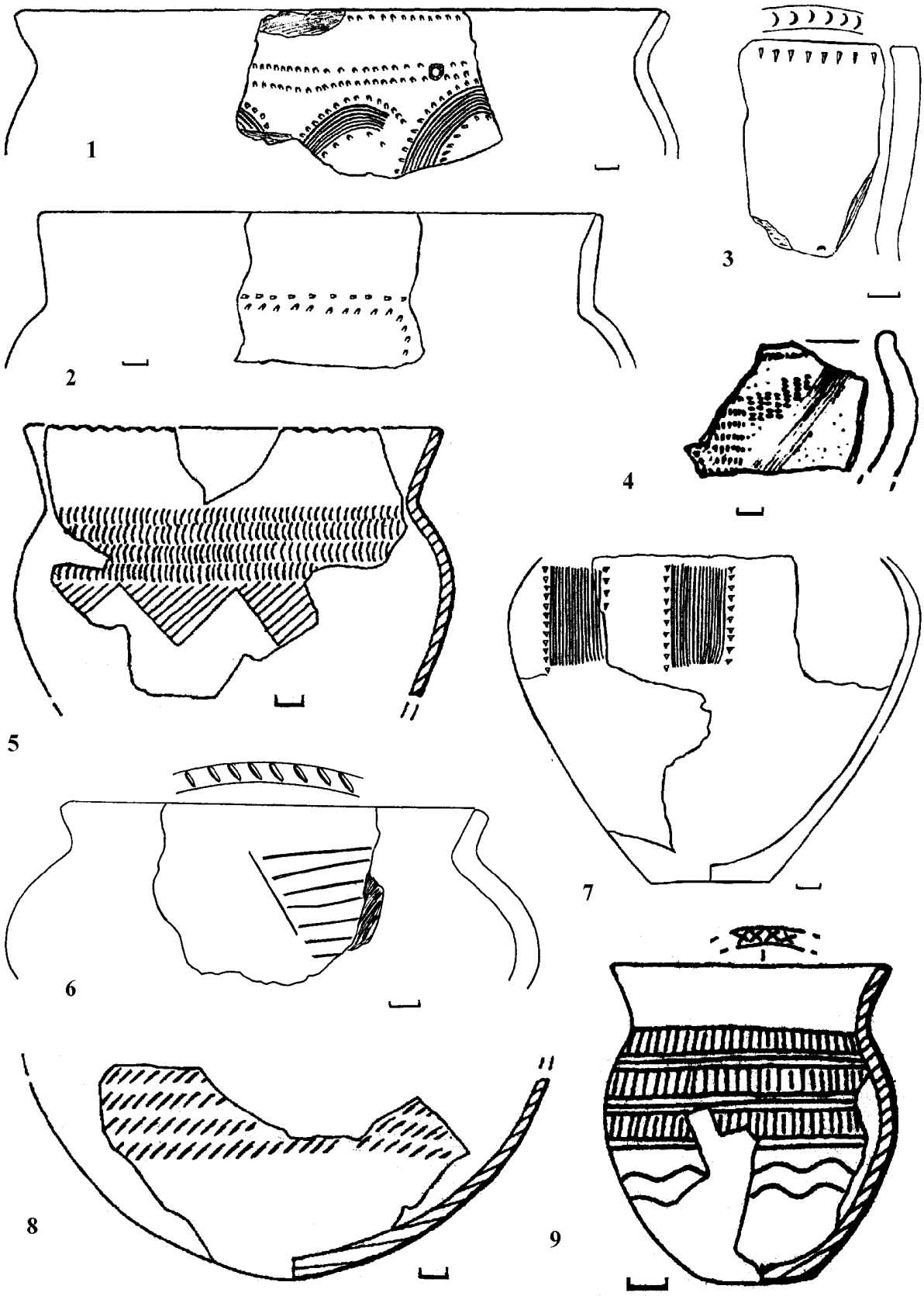


Fig. 126. Pottery of the Tripolye culture (period BI)

1-3 - Krasnogorovka; 4 - Vasilevka; 5,8 - Drutsy 1; 6 - Berezovskaja HPS; 7 - Zhury; 9 - Bereshty (4 after Шумова 1994; 5,8,9 - after Палагута 1998).

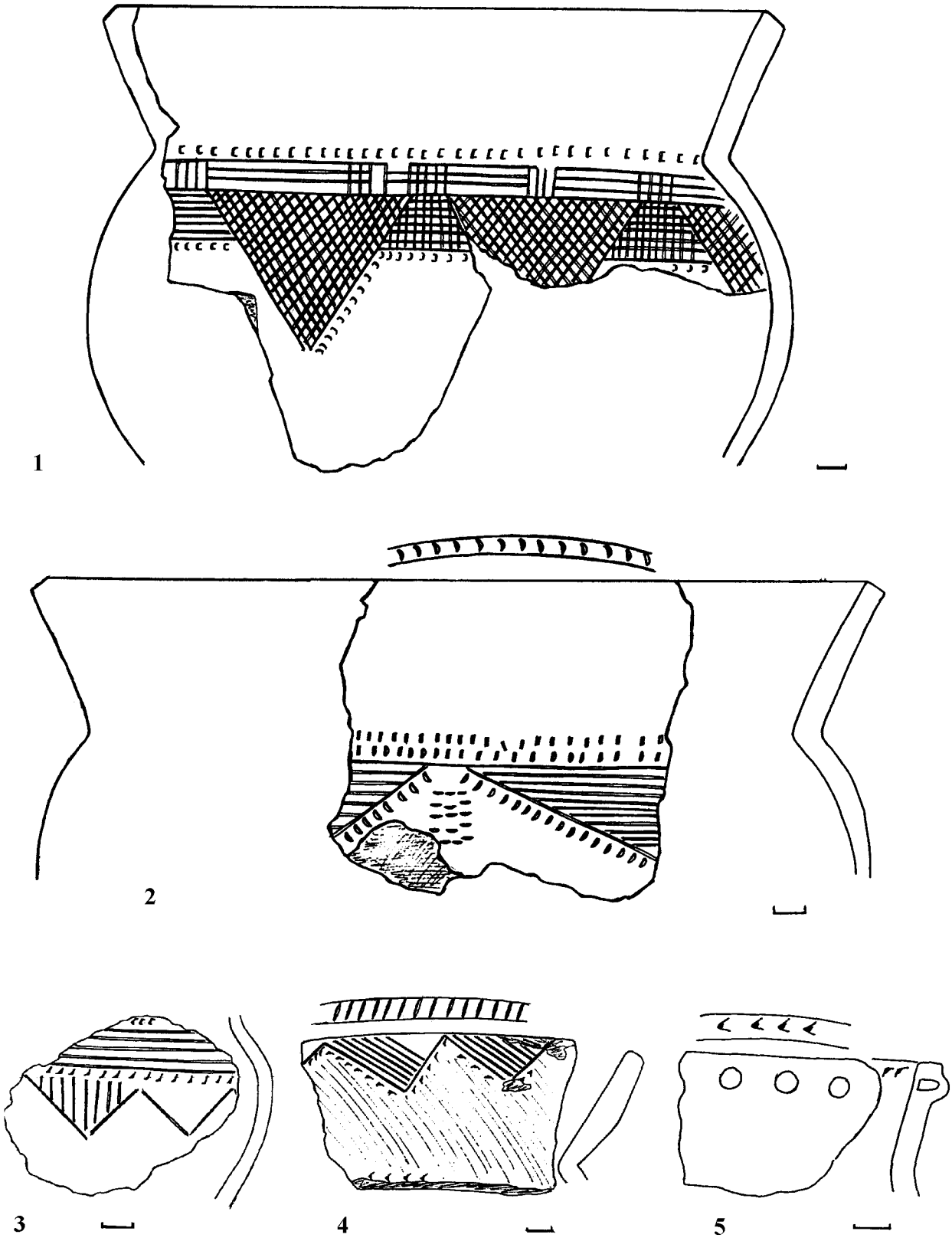


Fig. 127. Pottery of the Tripolye culture from Soloncheny 2.

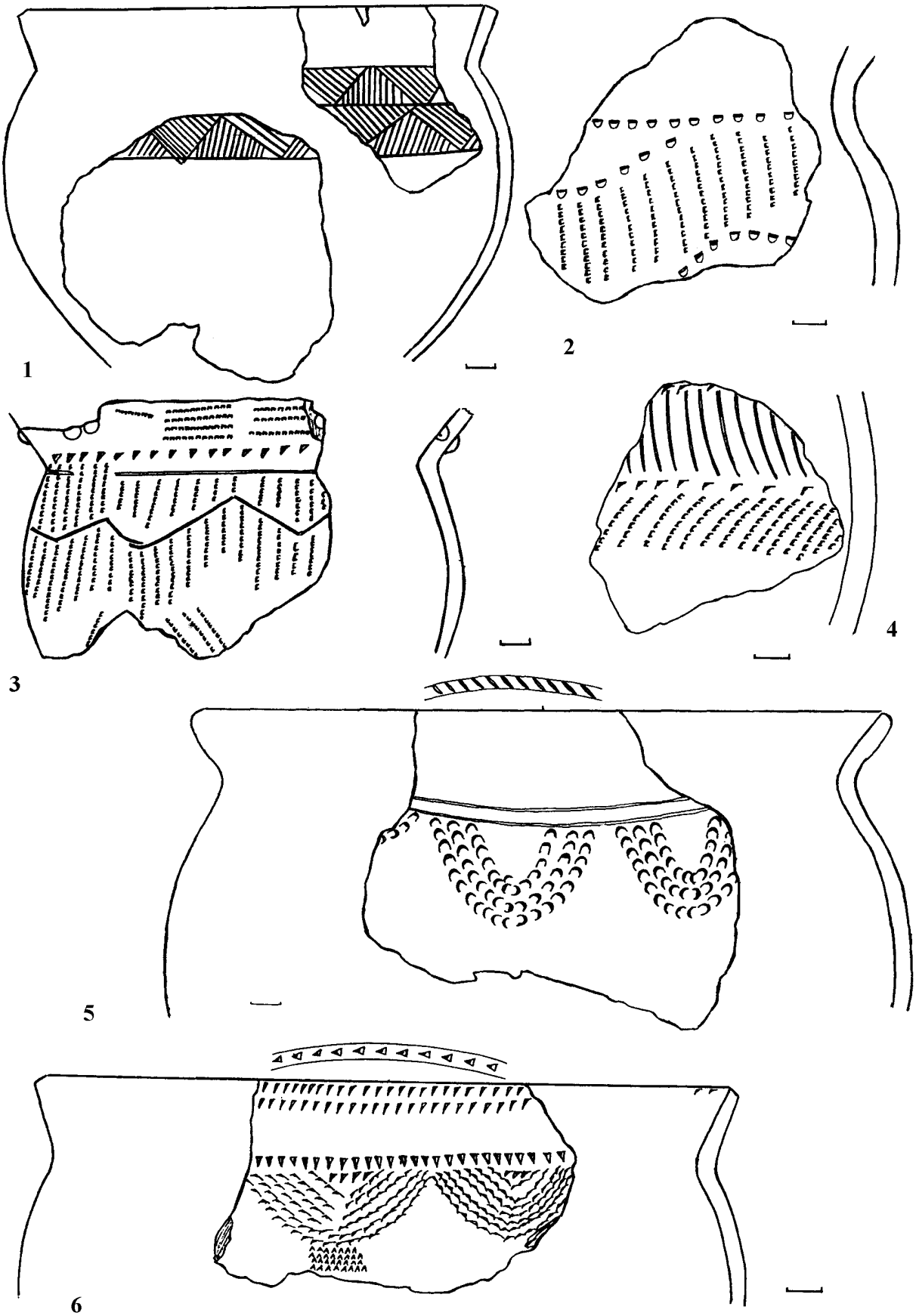


Fig. 128. Pottery of the Tripolye culture from Soloncheny 2.

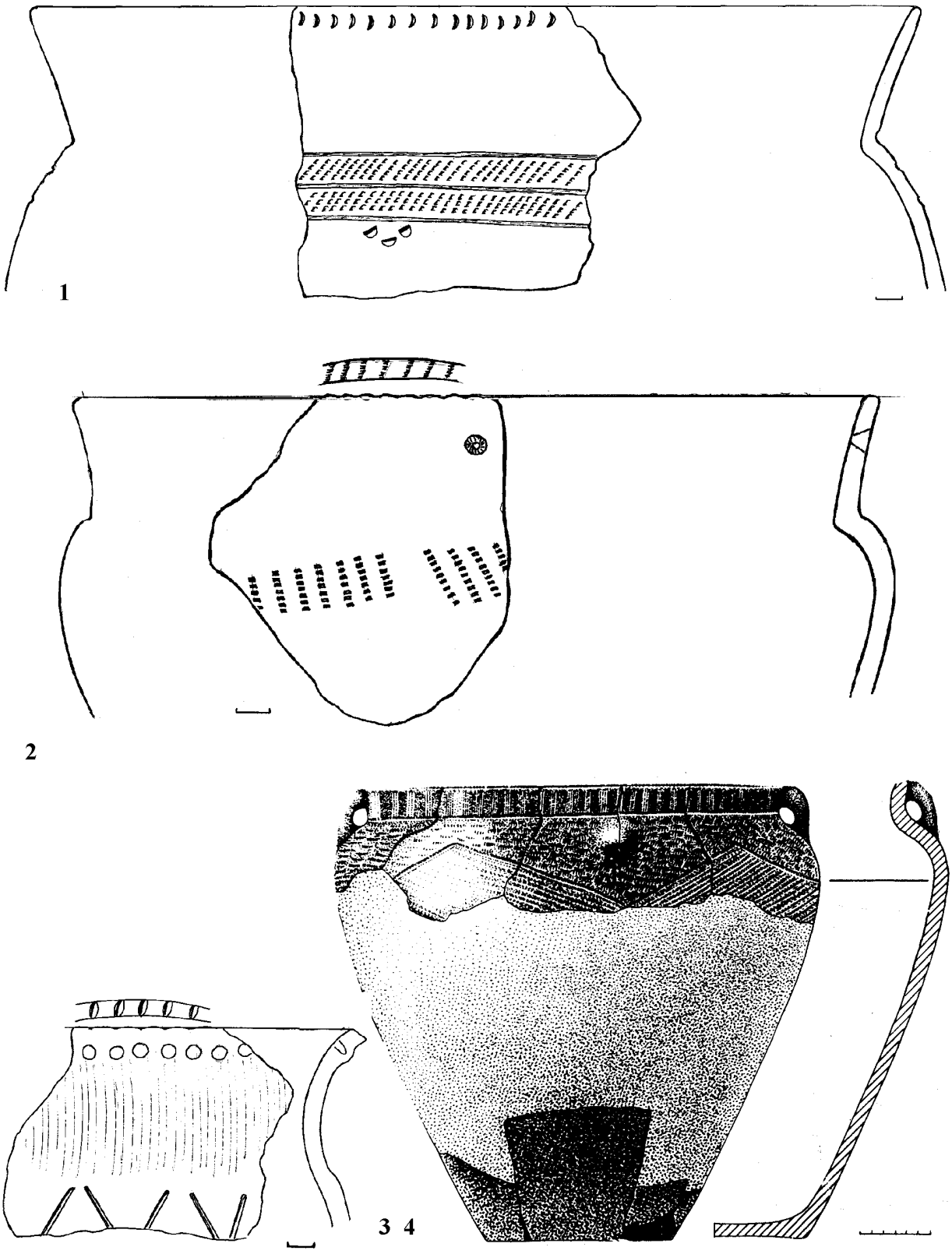


Fig. 129. Pottery of the Tripolye culture (period BI-II)
1 - Tripolye; 2,3 - Kadievtsy; 4 - Shkarovka (after Цвек 1979).

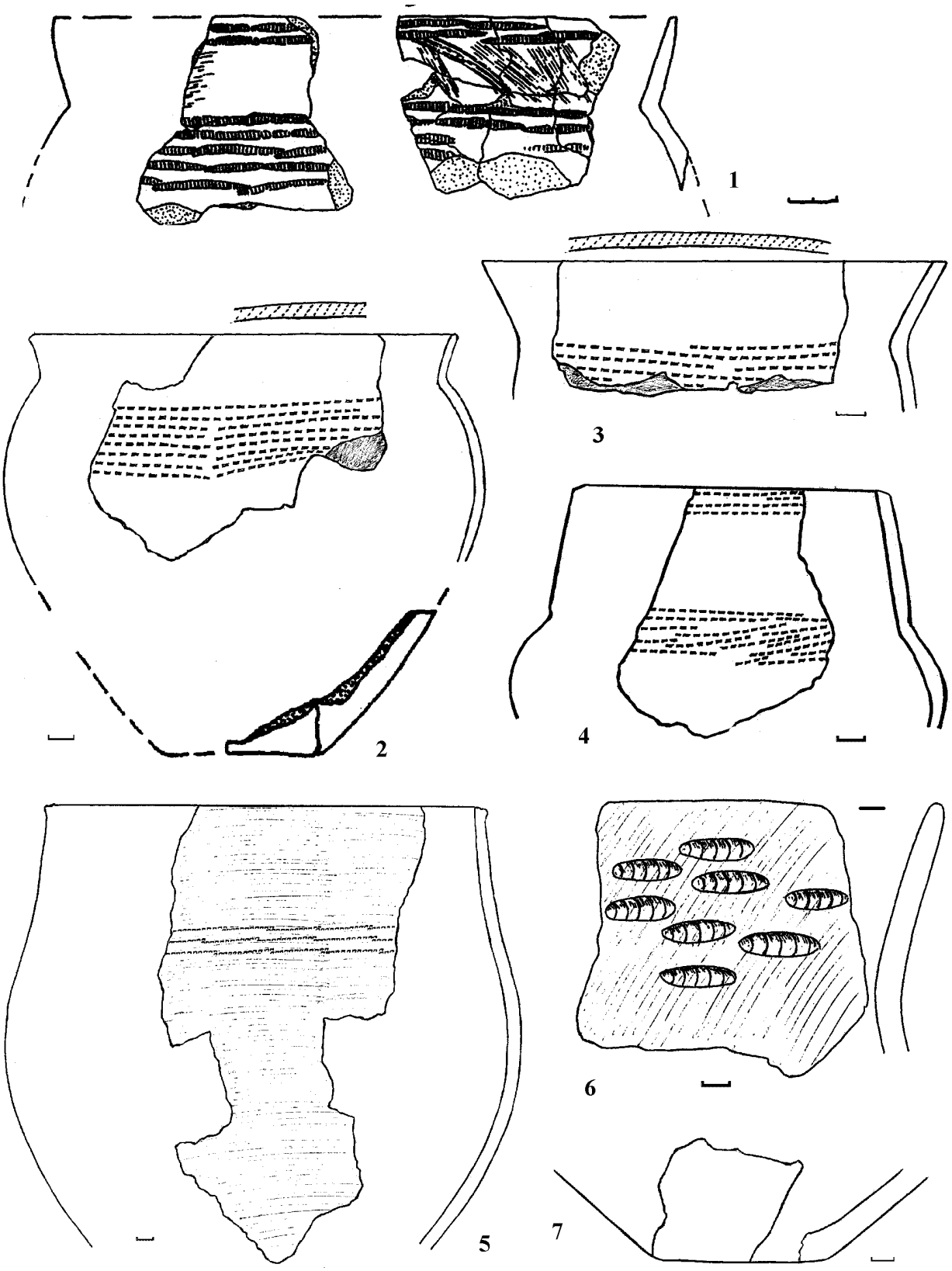


Fig. 130. Pottery of the Tripolye (1-3) and Dereivka (4-7) cultures
1-3 - Miropolie (after Цвек, Рассамакин 2002); 4-7 - Dereivka.

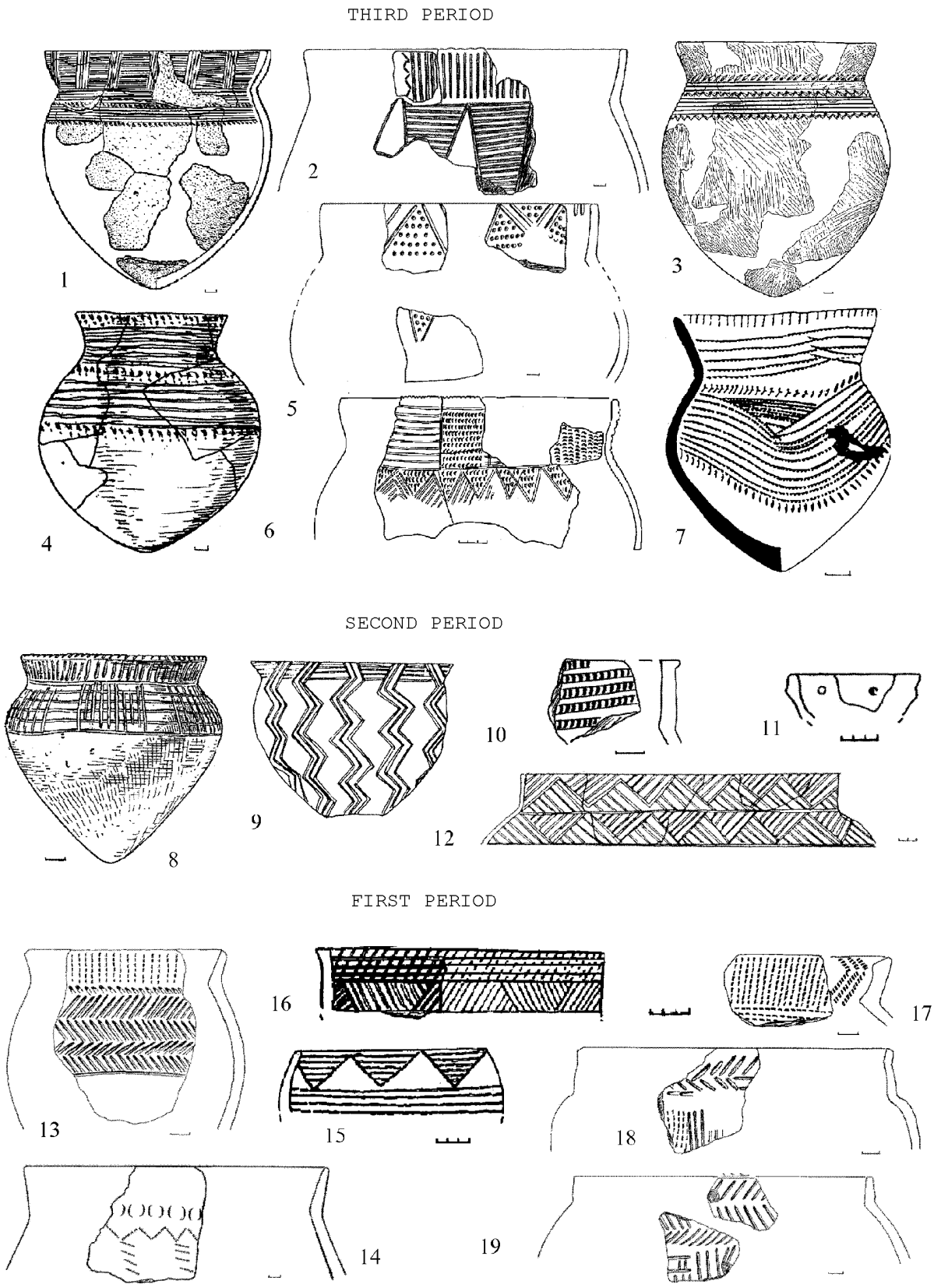
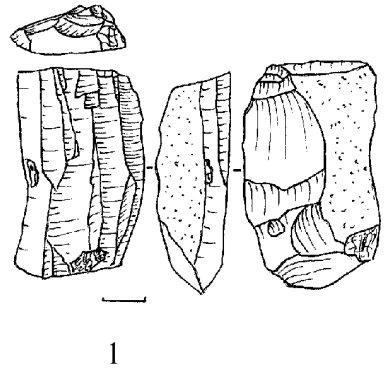


Fig. 131. Pottery of eastern variant of the Sredniy Stog culture

1 - Serebrjanskoe; 2,5 - Alexandrija; 3 - Chernikovo Ozero; 4,9-12,15-18 - Razdorskoe; 6 - Mokry Chaltyr; 8 - Popov; 9 - Mukhin 2; 13,14 - Tsimljanskoe; 19 - Razdolnoe.

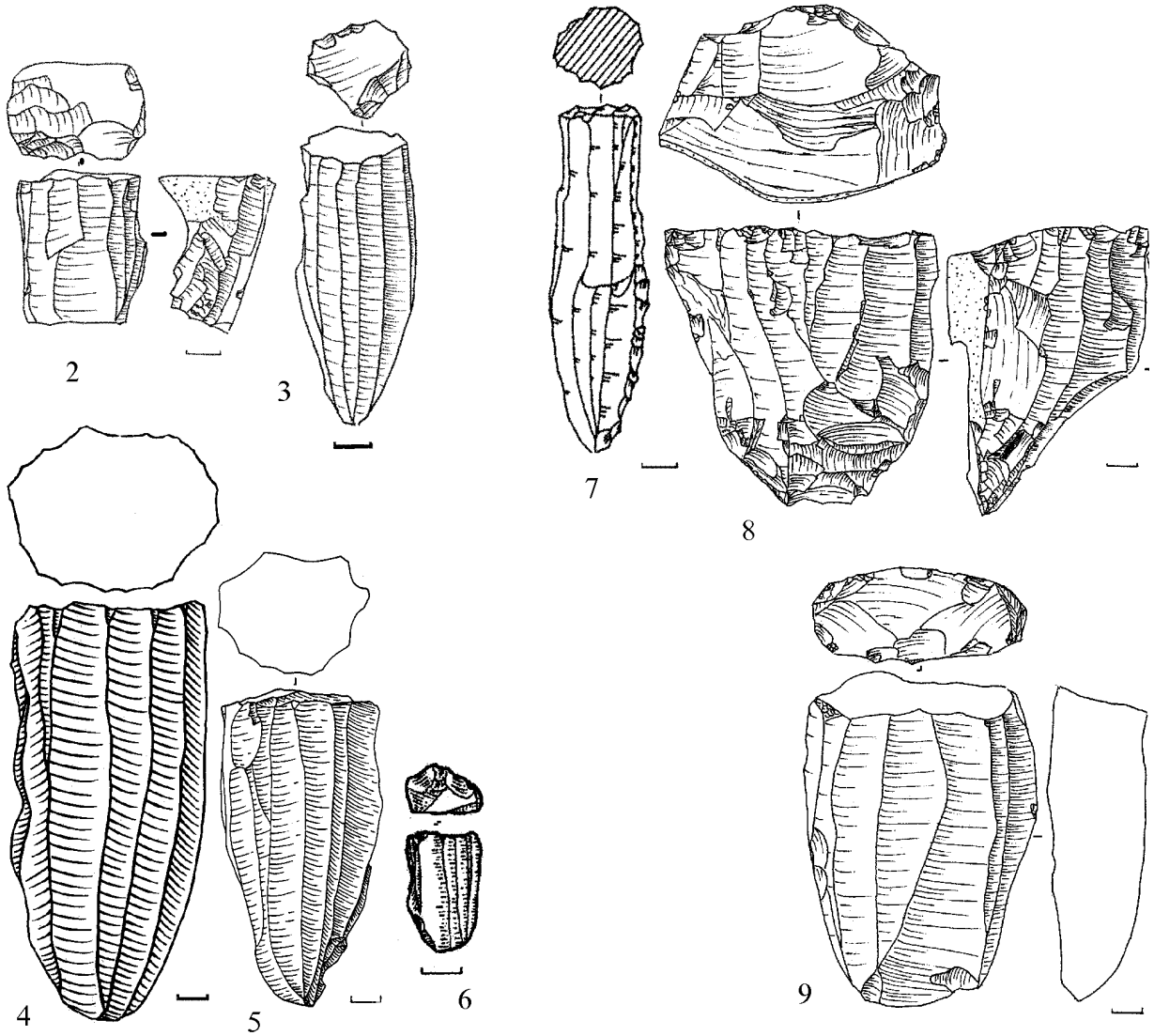
EASTERN VARIANT WESTERN VARIANT

FIRST PERIOD



1

SECOND PERIOD



2 3 7 8 4 5 6 9

Fig. 132. Cores of the Sredniy Stog culture

1-3 - Razdolnoe; 4 - Yama; 5 - Dzhurdzhuleshty; 6 - Tuzluki; 7 - Kainary; 8,9 - Chapli.

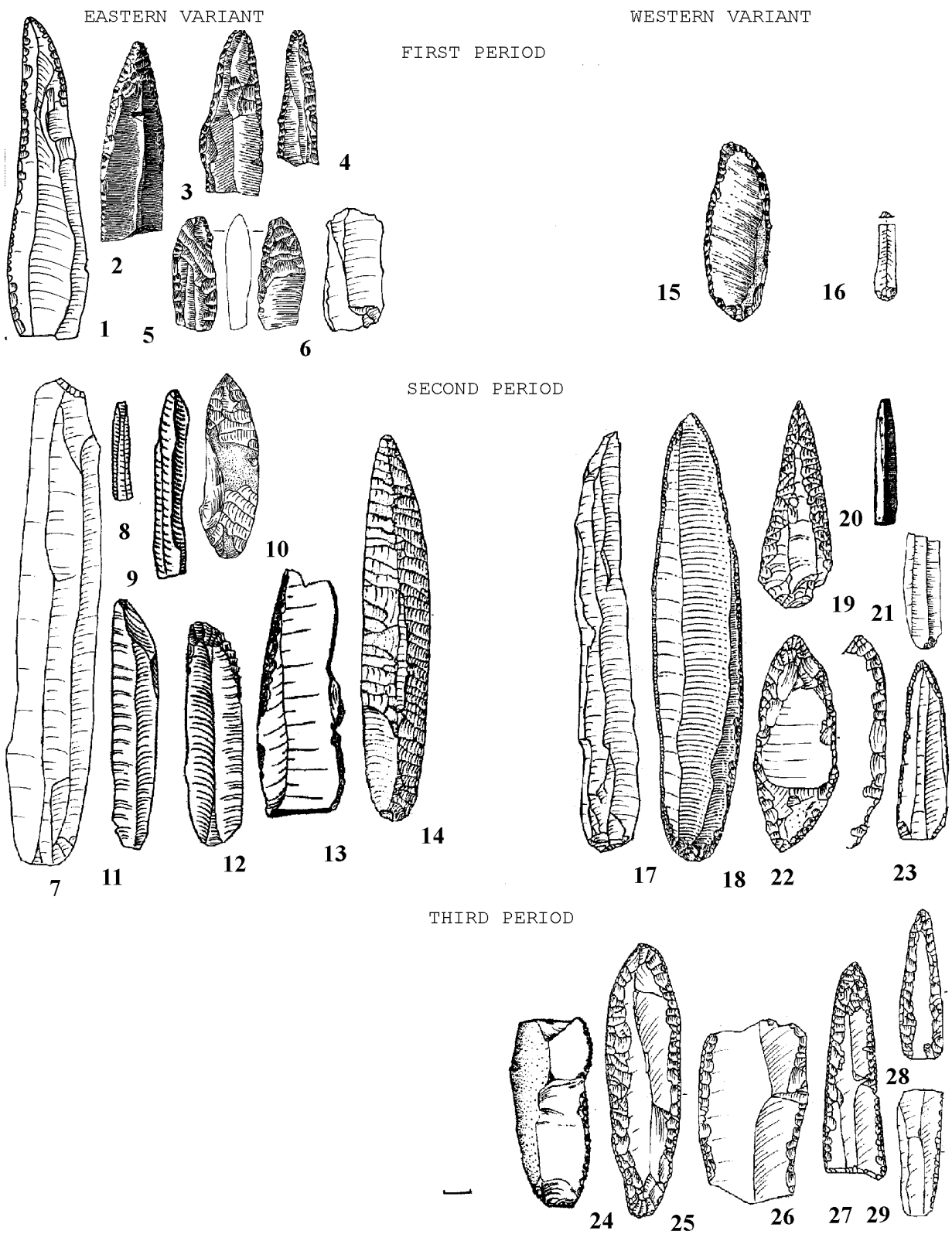
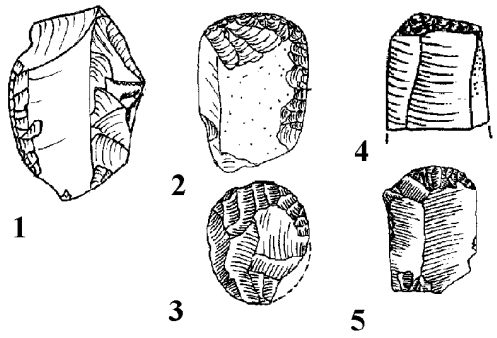


Fig. 133. Blades of the Sredniy Stog culture and tools made of them

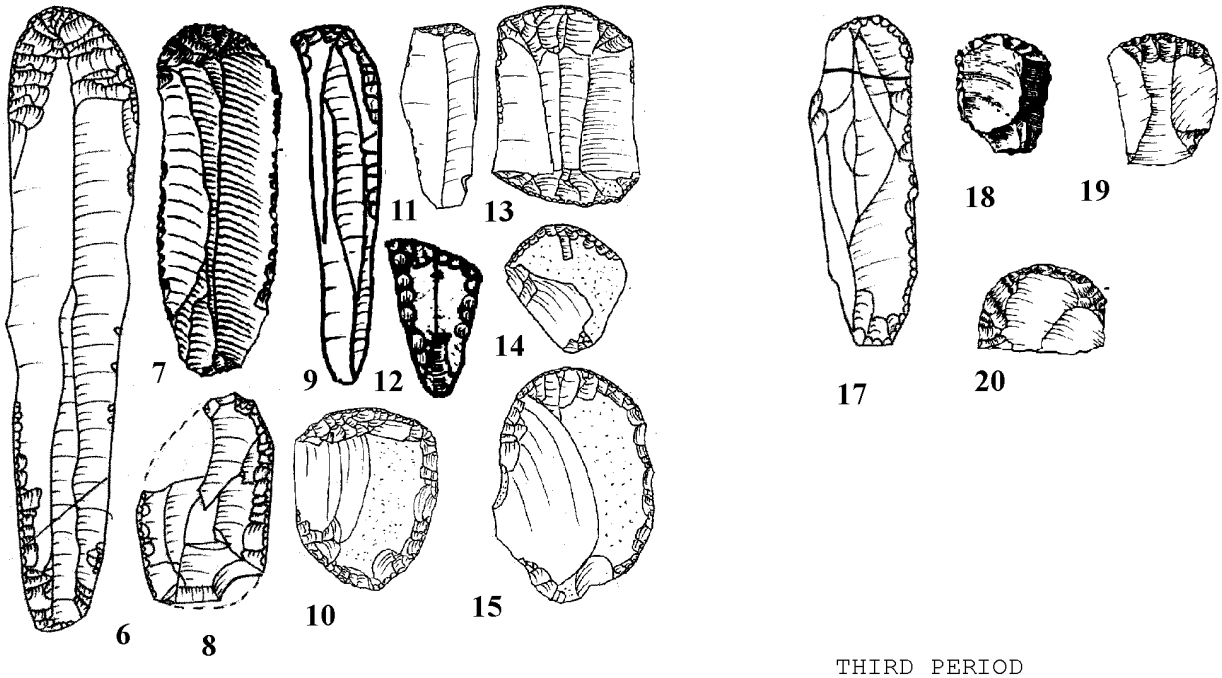
1,6 - Mariupol; 2-5 - Razdorskoe; 7-9,11,12 - Alexandrovsk; 13 - Karataevo; 14 - Bessergenovka; 14 - Lugansk; 15,16 - Krivoy Rog; 17 - Chapli; 18,19 - Igren; 20 - Decea Muresului; 21 - Semenovka; 22,23 - Strilcha Skelja; 24 - Vinogradnoe; 25-29 - Sredniy Stog.

EASTERN VARIANT WESTERN VARIANT

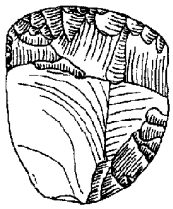
FIRST PERIOD



SECOND PERIOD



SECOND-THIRD PERIOD



THIRD PERIOD

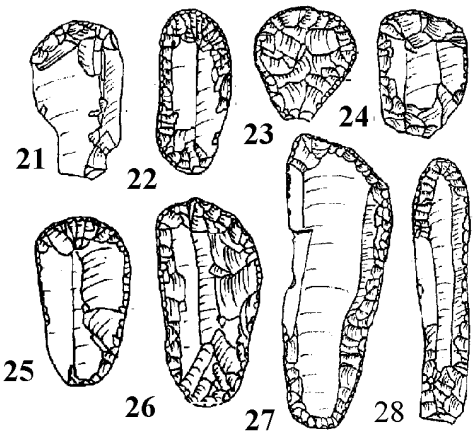


Fig. 134. Scrapers of the Sredniy Stog culture

1,2,10,11,13-15 - Razdolnoe; 3,5,16 - Razdorskoe; 4 - Staronizhestebliev-skaja; 6,8 - Alexandrovsk; 7 - Yama; 9 - Komarovo; 12 - Veselaja Roscha; 17 - Suvorovo; 18 - Decea Muresului; 19,20 - Semenovka; 21-28 - Sredniy Stog.

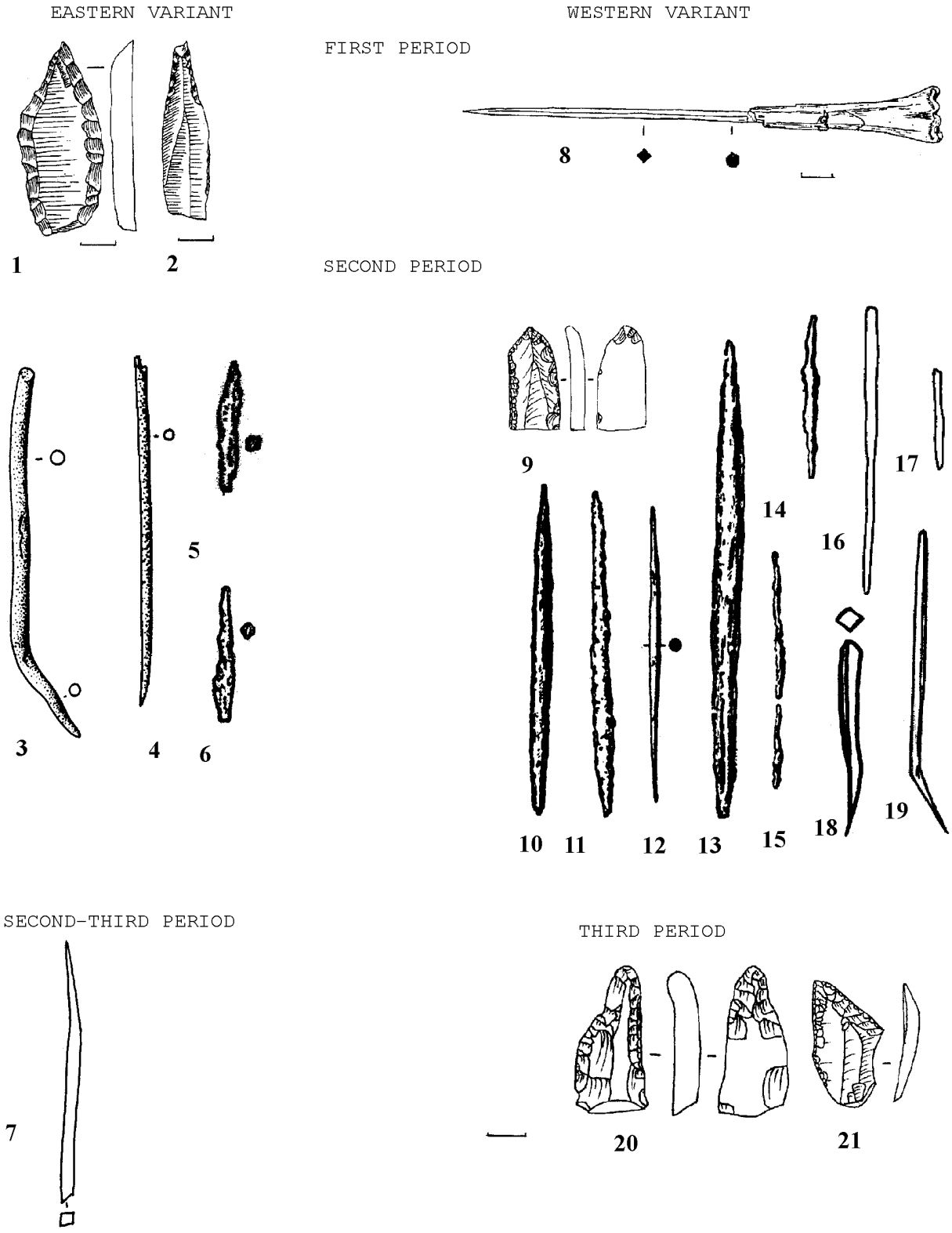


Fig. 135. Awls, borers and perforators of the Sredniy Stog culture

1,2,7 - Razdorskoe; 3,4 - Giurgiulesti; 5,6 - Mukhin 2; 8 - Krivoy Rog; 9,18 - Semenovka; 10-15 - Decea Muresului; 16,17 - Suvorovo; 19 - Lugoch; 20,21 - Sredniy Stog.

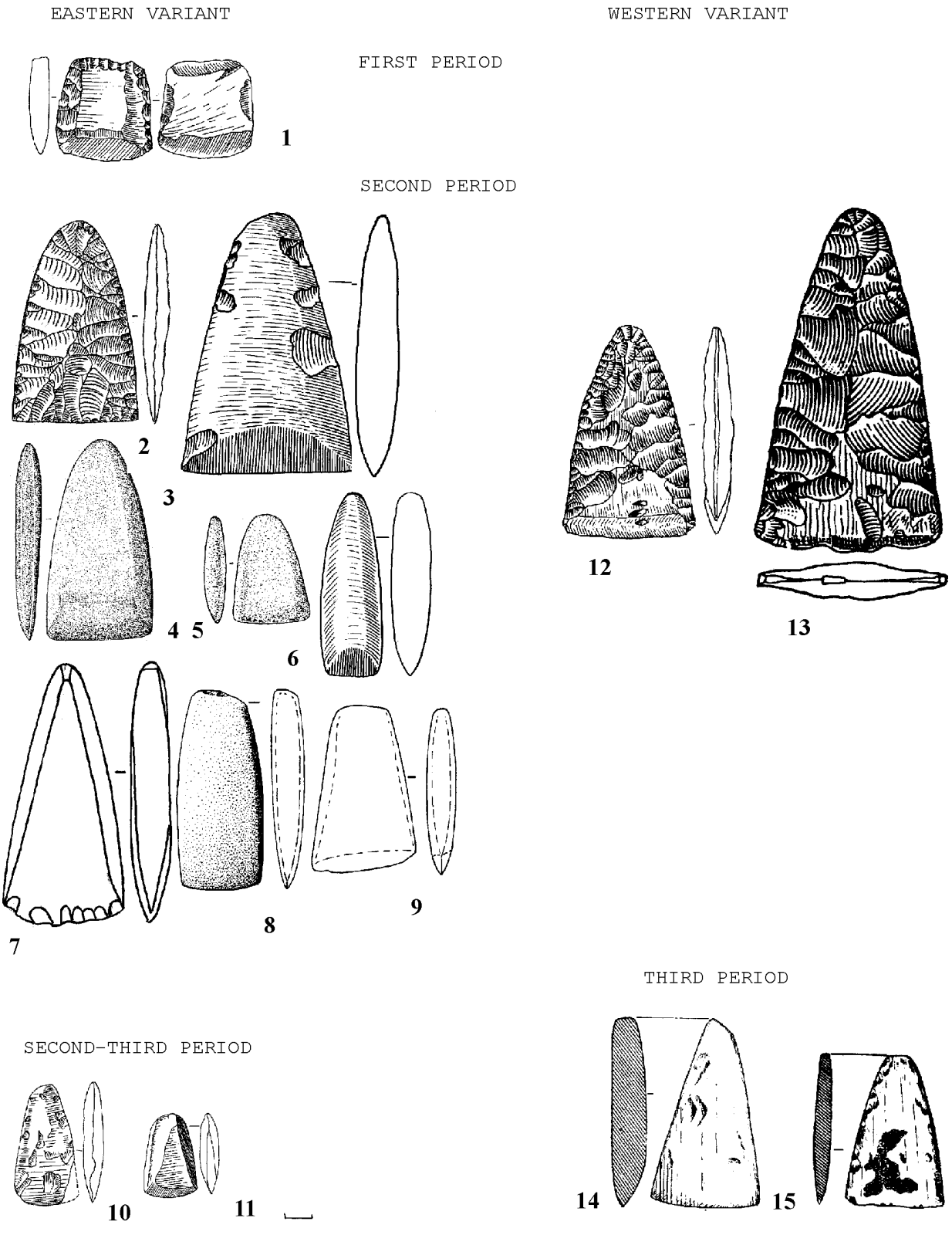
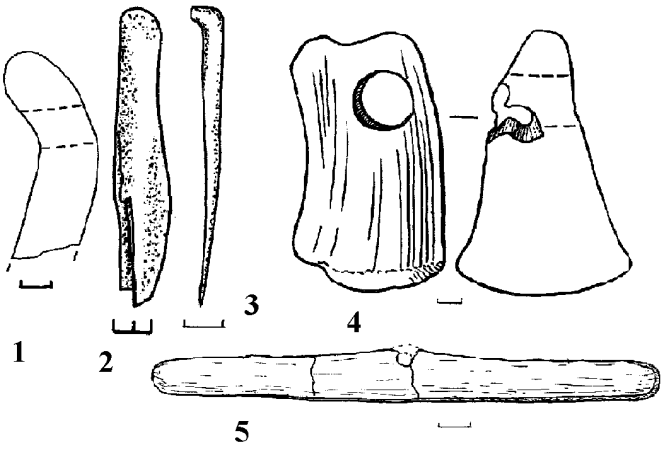


Fig. 136. Axes of the Sredniy Stog culture

1,10,11 - Razdorskoe; 2,4,5 - Lugansk; 3,6 - Yama; 7 - Komarovo; 8,9 - Dzhurdzhuleshty; 12,13 - Petro-Svistunovo; 14,15 - Felchu.

EASTERN VARIANT WESTERN VARIANT

FIRST PERIOD



SECOND PERIOD

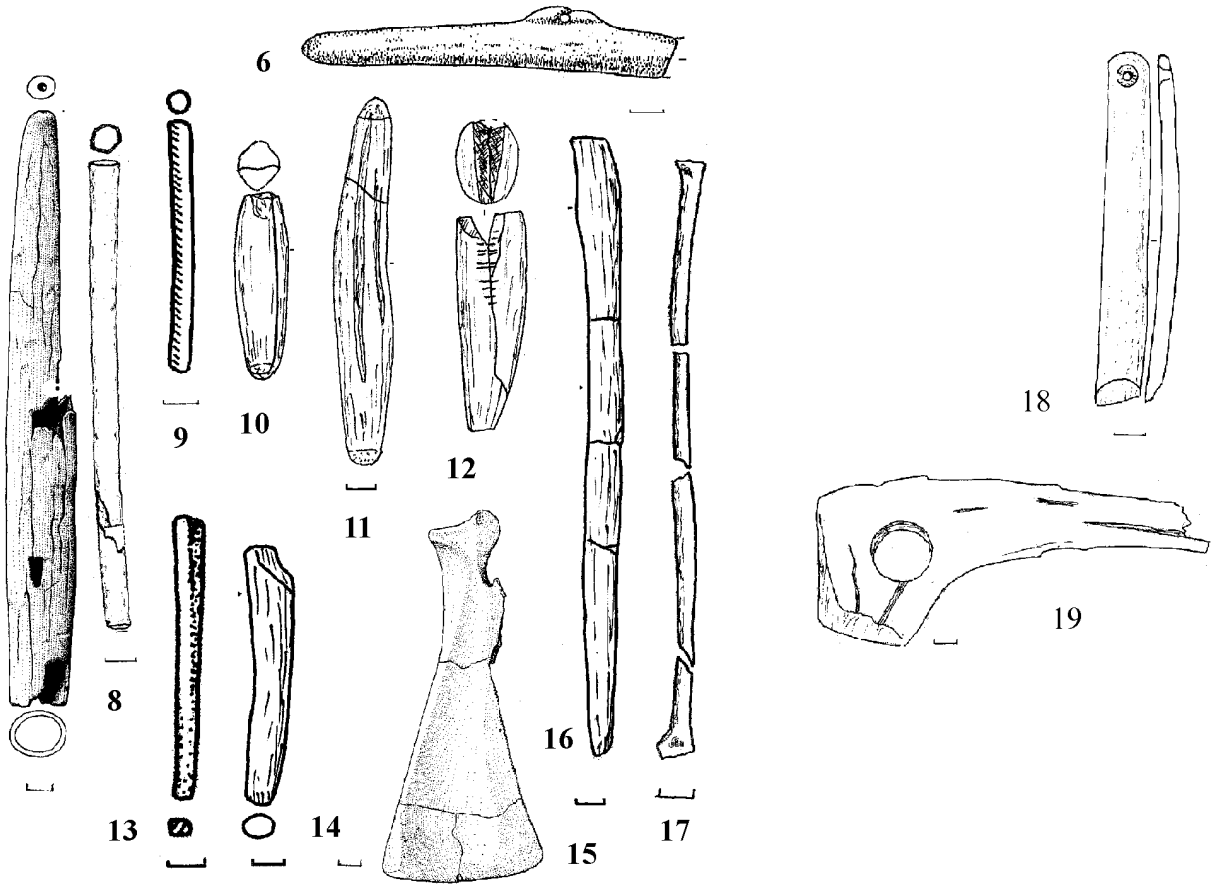


Fig. 137. Bone artifacts of the Sredniy Stog culture

1-3 - Staronizhesteblievskaja; 4,9 - Razdorskoe; 5 - Mariupol; 6,8, 10-14 - Alexandrovsk; 7,15 - Giurgiulesti ; 16,17 - Komarovo; 18 - Strilcha Skelja; 19 - Chapli.

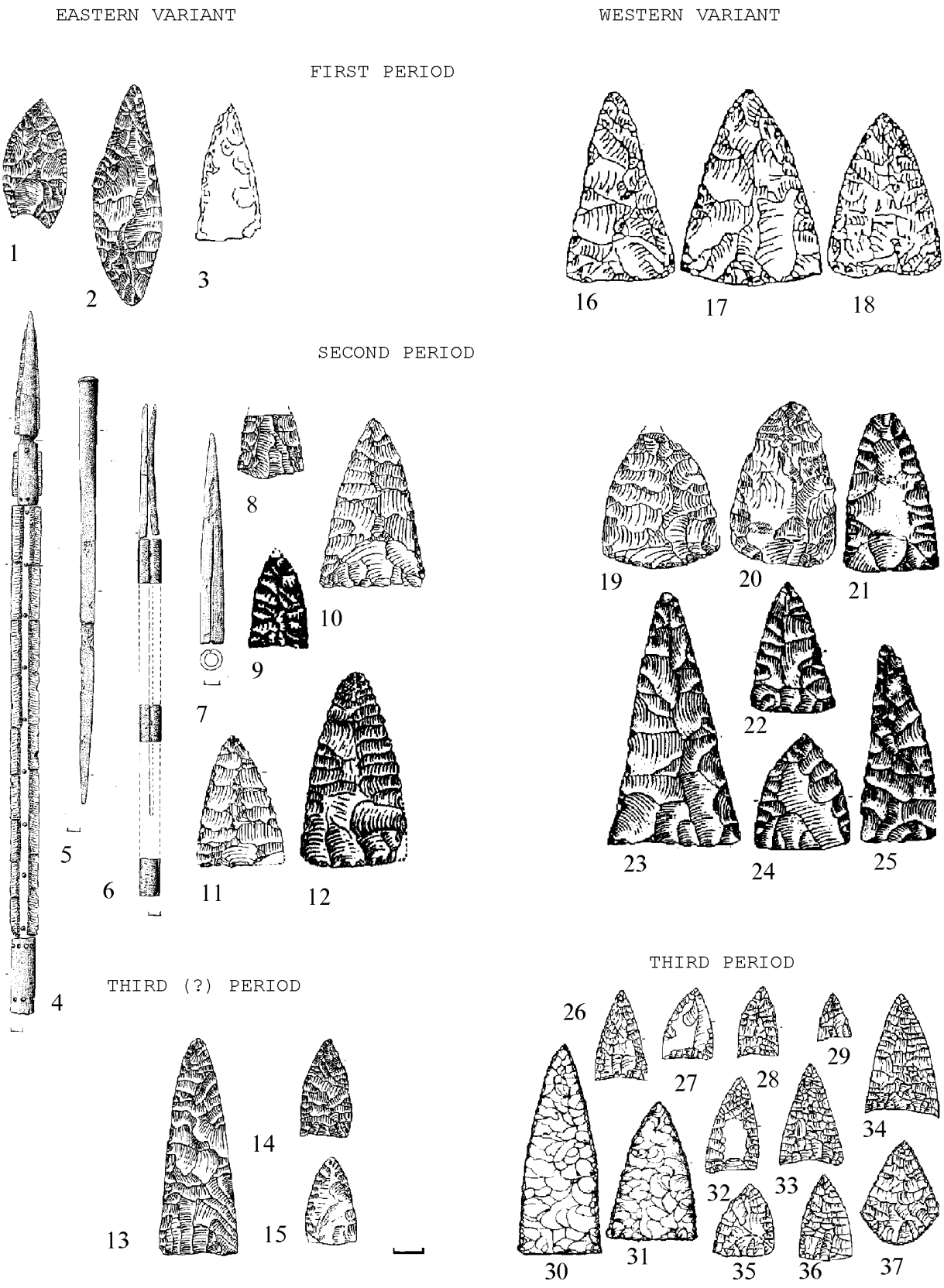


Fig. 138. Weaponry of the Sredniy Stog culture

1,2,13-15 - Razdorskoe; 3 - Mariupol; 4-7 - Giurgiulesti ; 8,10,11 - Yama; 9 - Krasnogorovka; 12 - Alexandrovsk; 16-18 - Krivoy Rog; 19,20 - Igren; 21-25 - Reka Devnja; 26-29,32-37 - Sredniy Stog; 30,31 - Falciu.

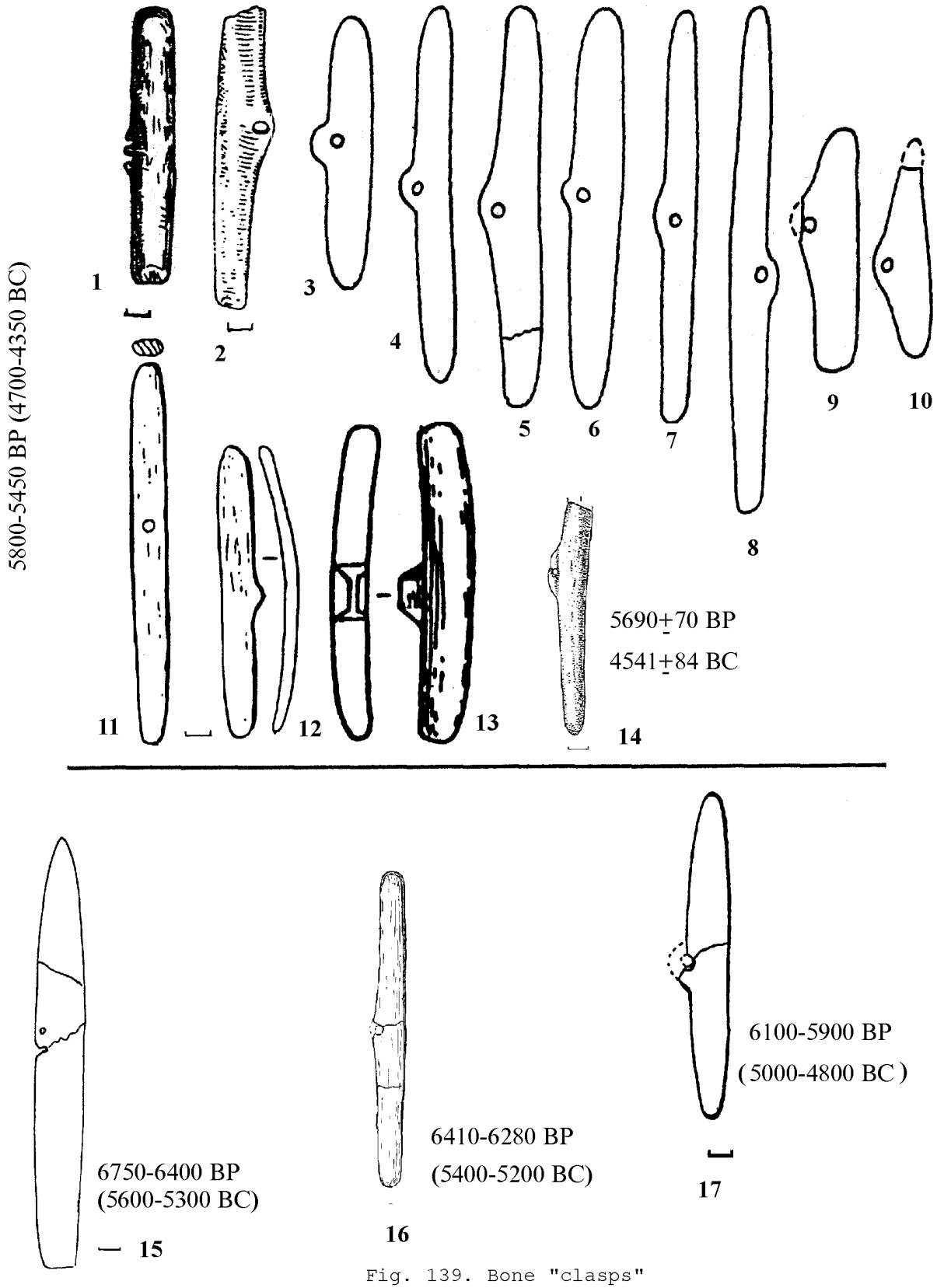
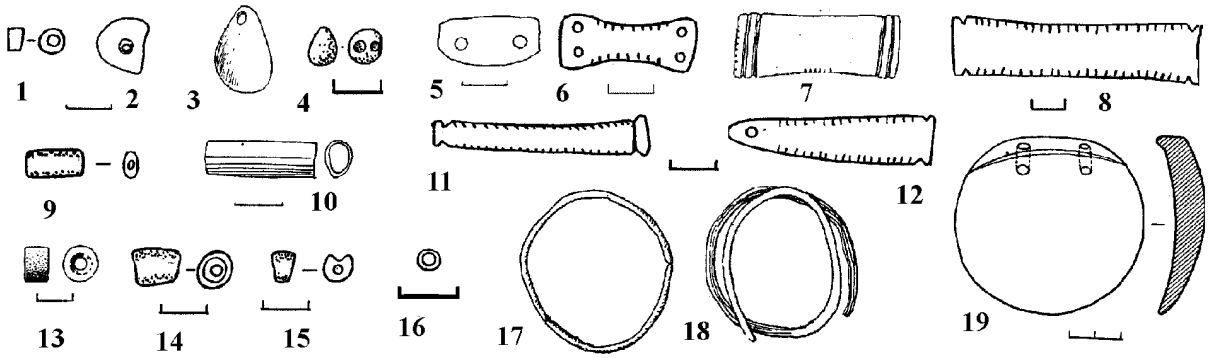


Fig. 139. Bone "clasps"

1 - Ozernoe; 2 - Hebeshesht; 3-7 - Novye Ruseshty; 8 - Berezovskaja HPS; 9,10 - Sabatinovka 1; 11,12 - Zamok; 13 - Svobodnoe; 14 - Alexandrovsk; 15 - burial 83 Mariupol cemetery; 16 - burial 21 Mariupol cemetery; 17 - Lenkovtsy.

FIRST PERIOD



SECOND PERIOD

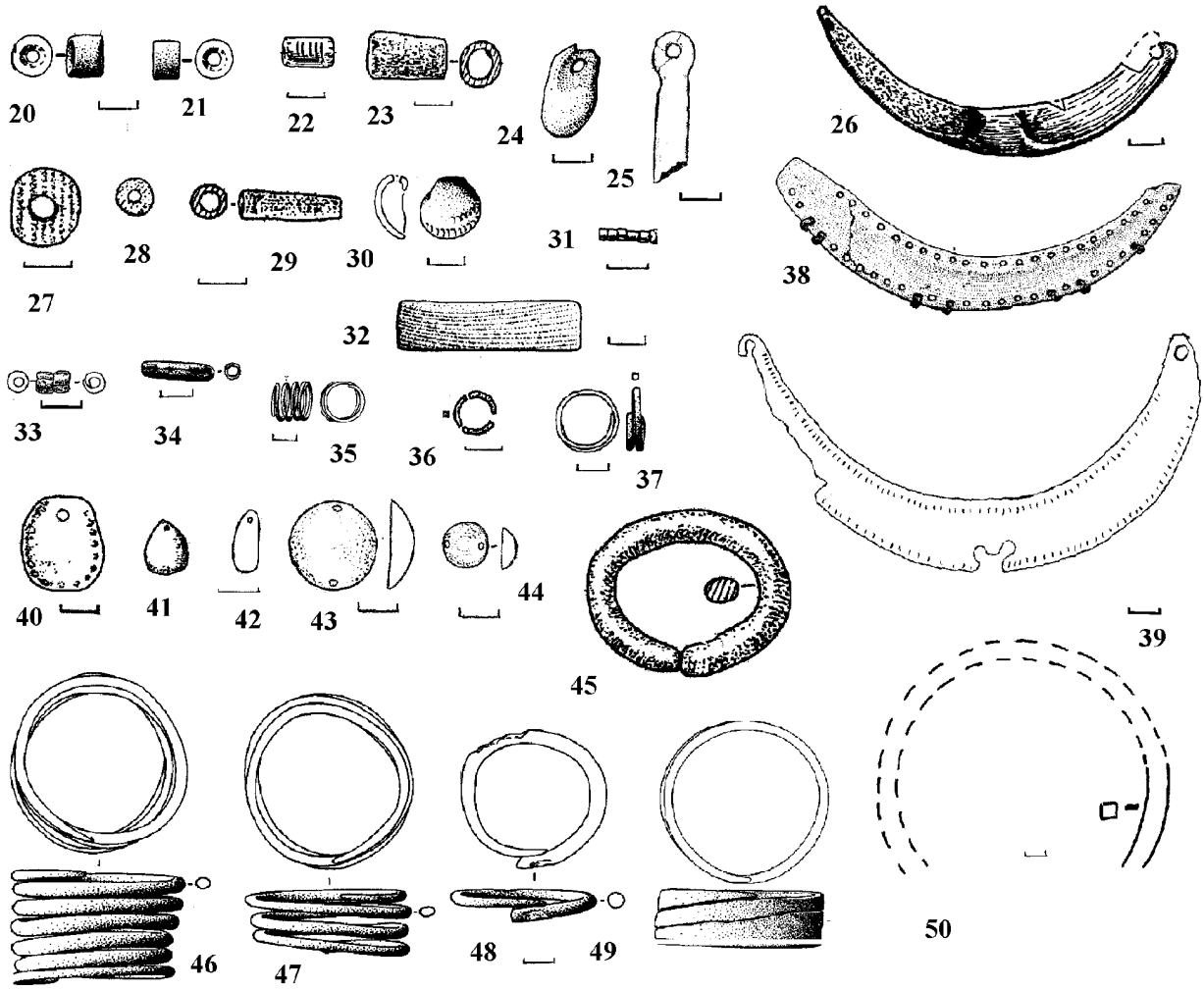


Fig. 140. Adornments of eastern variant of the Sredniy Stog culture

1,6,8,9,11-15 - Staronizhesteblievskaja; 2,7,16-18 - Mariupol; 3,4,10 - Karataevo; 5 - Razdorskoe; 19 - Grozny; 20,21,24,30,32-35,38,46-49 - Giurgiulesti ; 22,31 - Popov; 23,27-29, 40, 41,45 - Alexandrovsk; 25 - Lugansk; 26 - Liventsovka; 36,37 - Mukhin 2; 39,42 - Veselaja Roscha; 43,44 - Verkhniy Akbash; 50 - Komarovo. 1,2,27-32 - nacre; 3-12,20-26, 38,39 - bone; 13-15,19,50 - stone; 16-18,33-49 - metal.

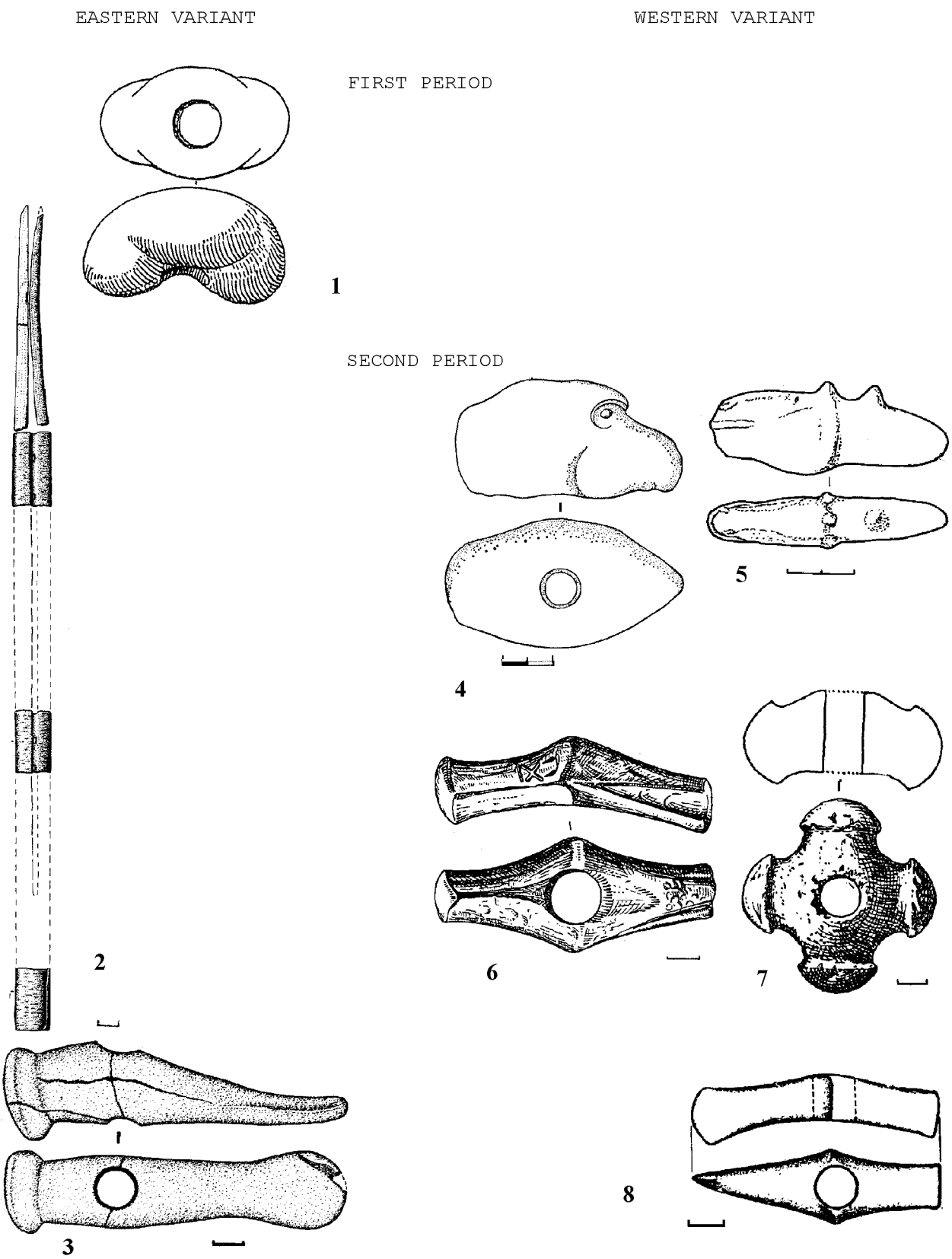


Fig. 141. Symbols of power of the Sredniy Stog culture

1- Mariupol; 2 - Giurgiulesti ; 3 - Lugansk; 4 - Kulevcha; 5 - Suvorovo; 6 - Decea Muresului; 7 - Petro-Svistunovo; 8 - Falcia.

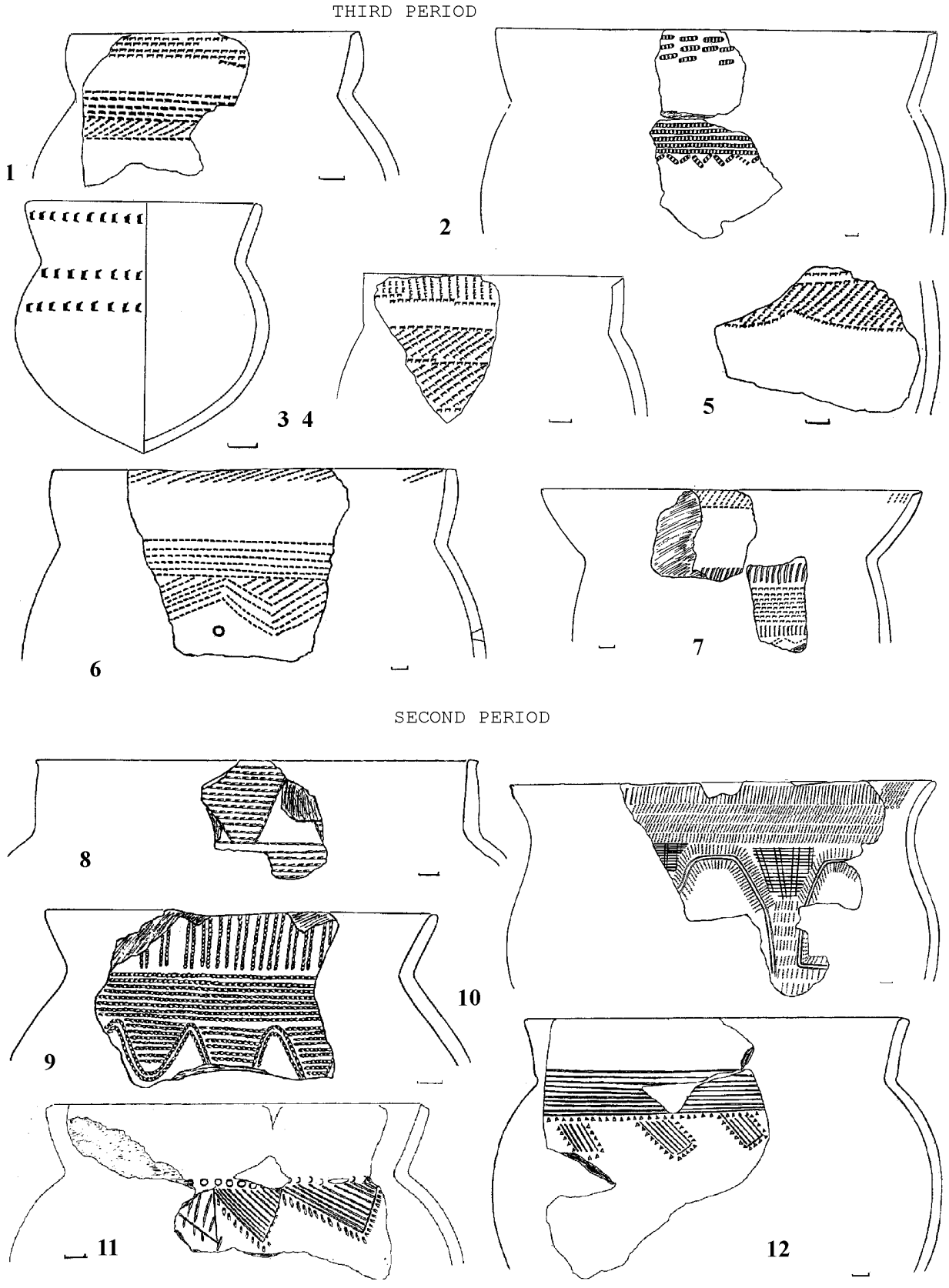


Fig. 142. Pottery of western variant of the Sredniy Stog culture
1,5,10-12 - Strilcha Skelja; 2-4,7 - Sredniy Stog; 6 - Kodachok; 8 - Semenovka; 9 - Kizlevy.

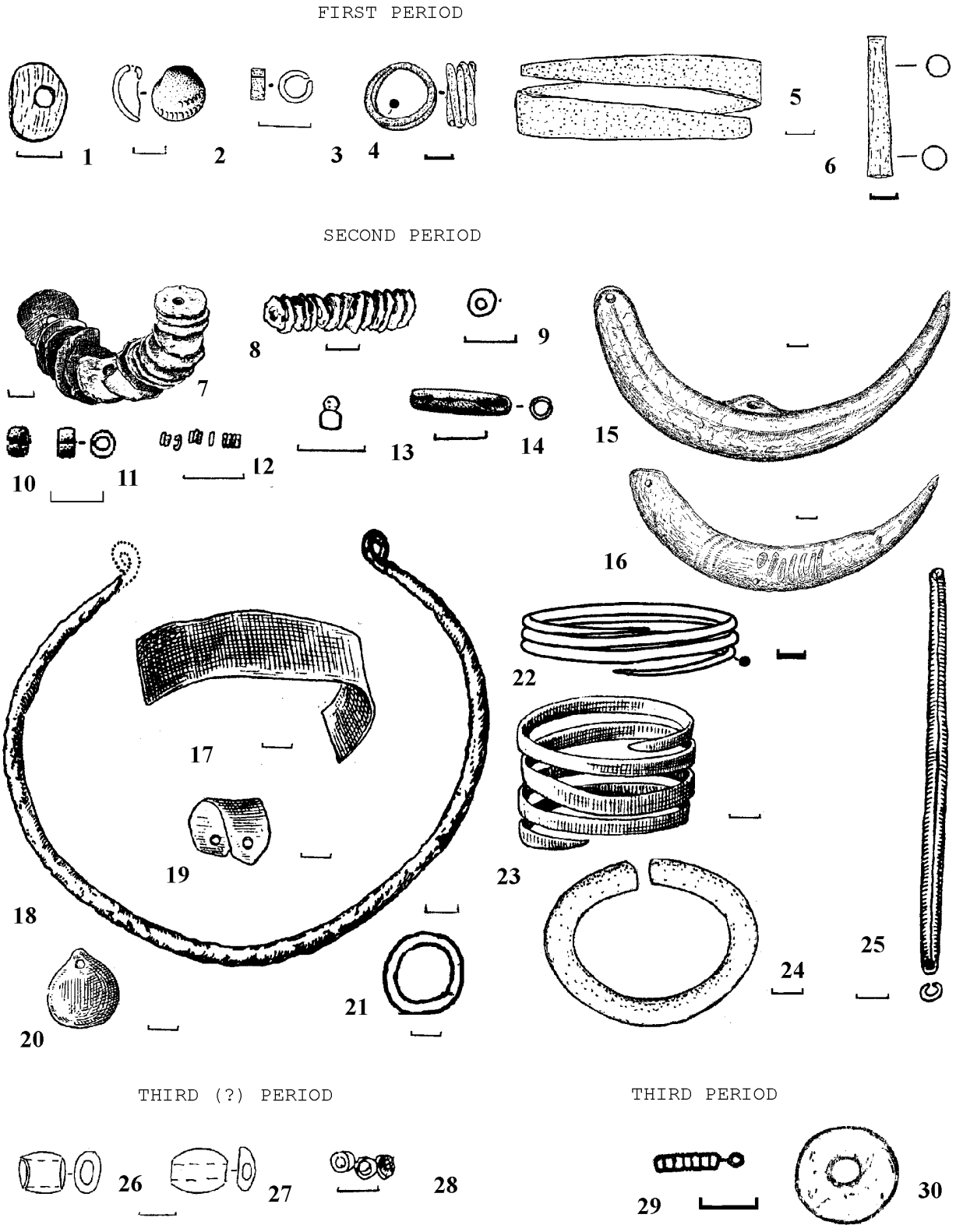


Fig. 143. Adornments of western variant of the Sredniy Stog culture

1-6 - Krivoy Rog; 7,8,10,11,14,18 - Decea Muresului; 9,21 - Reka Devnja; 12,13,17-20,23 - Chapli; 15,16,22,25 - Petro-Svistunovo; 24 - Lugoch; 26-28 - Igren; 29,30 - Falciu. 1,2,7-9 - nacre; 3-5,10-14,17-20,22,23, 25,29 - copper; 6,21,24 - gold; 15,16,26-28 - bone.

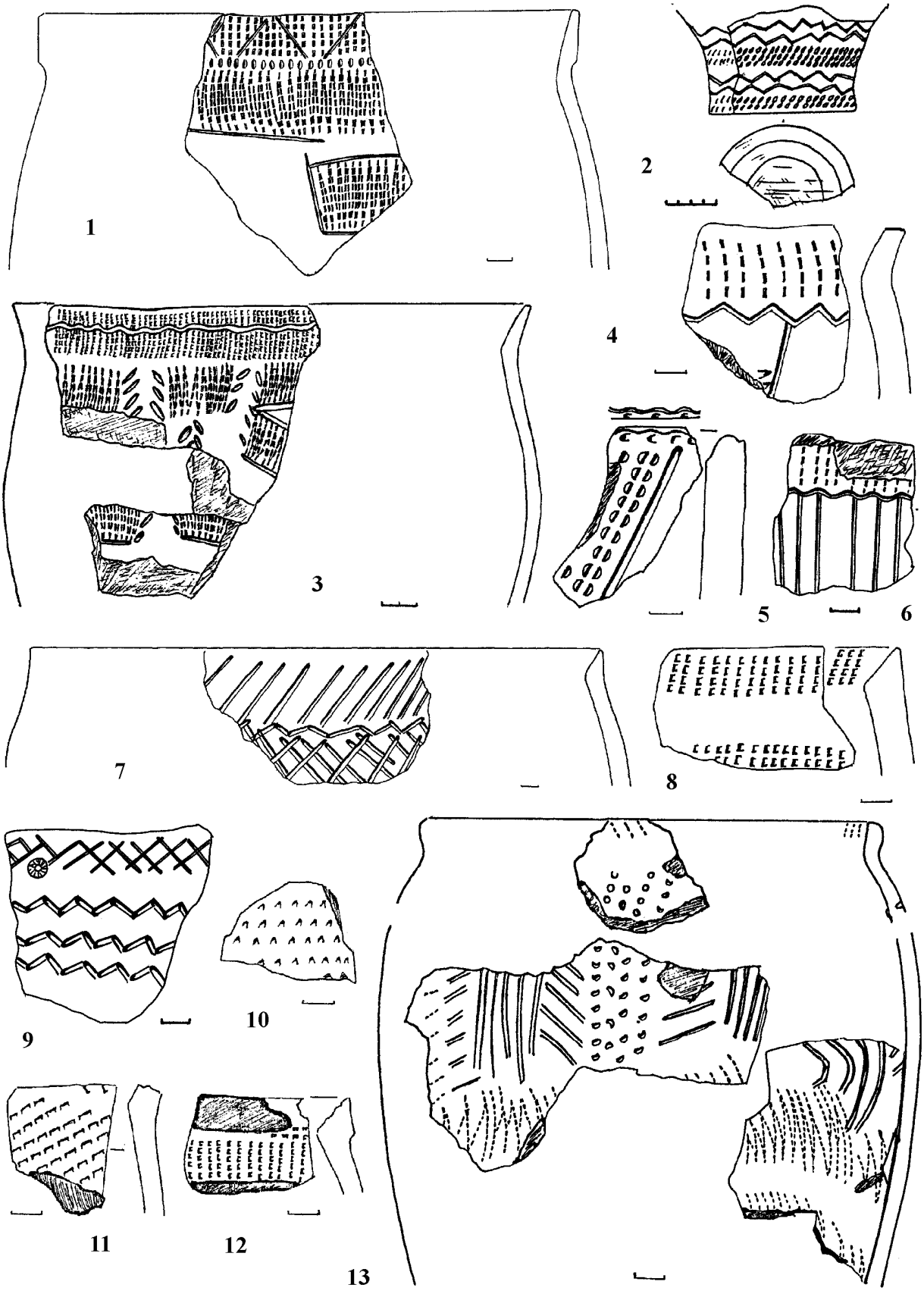


Fig. 144. Pottery of Late Neolithic from the Don - Kalmius interfluve
1-3 - Razdorskoe; 4-9 - Rakushechny Jar; 10-13 - Razdolnoe.

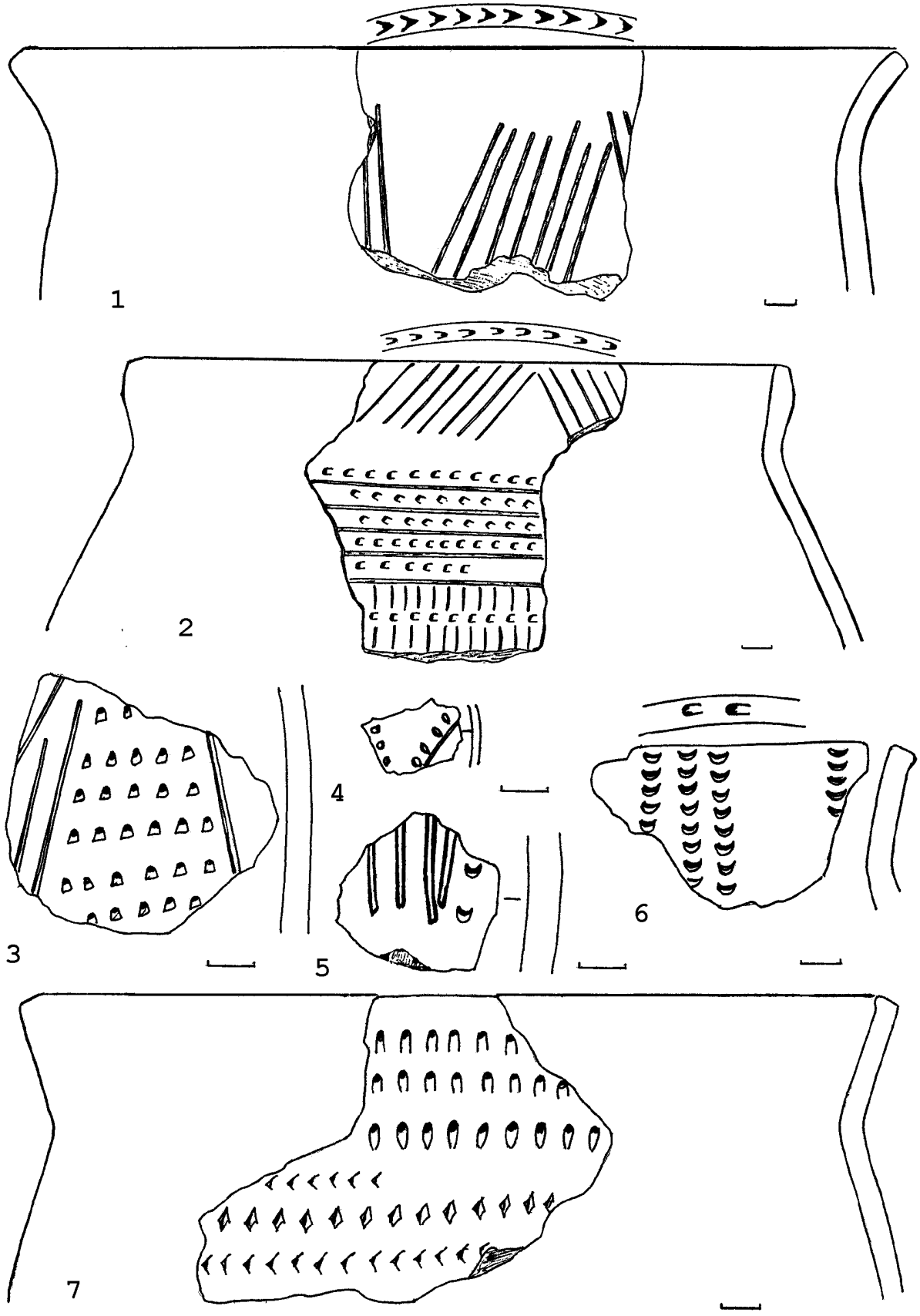


Fig. 145. Pottery of the Surskaja culture
1-3,6,7 - Strilcha Skelja; 4,5 - Semenovka.

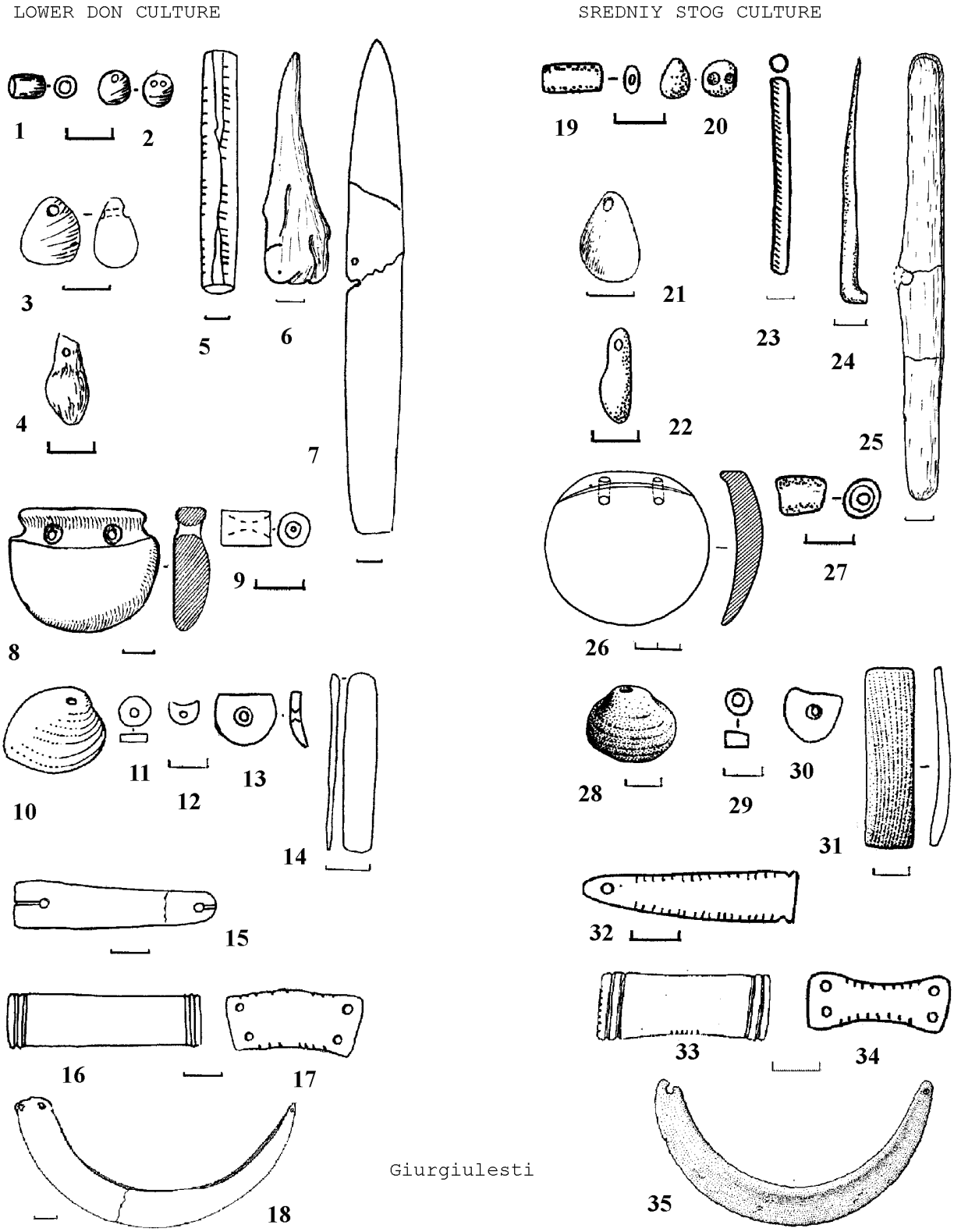


Fig. 146. Comparative table of materials of the Lower Don (1-18) and Sredniy Stog (19-35) cultures

1-13,15-18,25,30,33 - Mariupol; 14,23 - Razdorskoe; 19,22,24,27,32,34 - Staronizhesteblievskaja; 20,21 - Karataevo; 26 - Grozny; 28,31,35 - Giurgiulesti ; 29 - Bessergenovka. 1-7, 15-25,32-35 - bone; 8,9,26,27 - stone; 10-14,28-31 - shell.

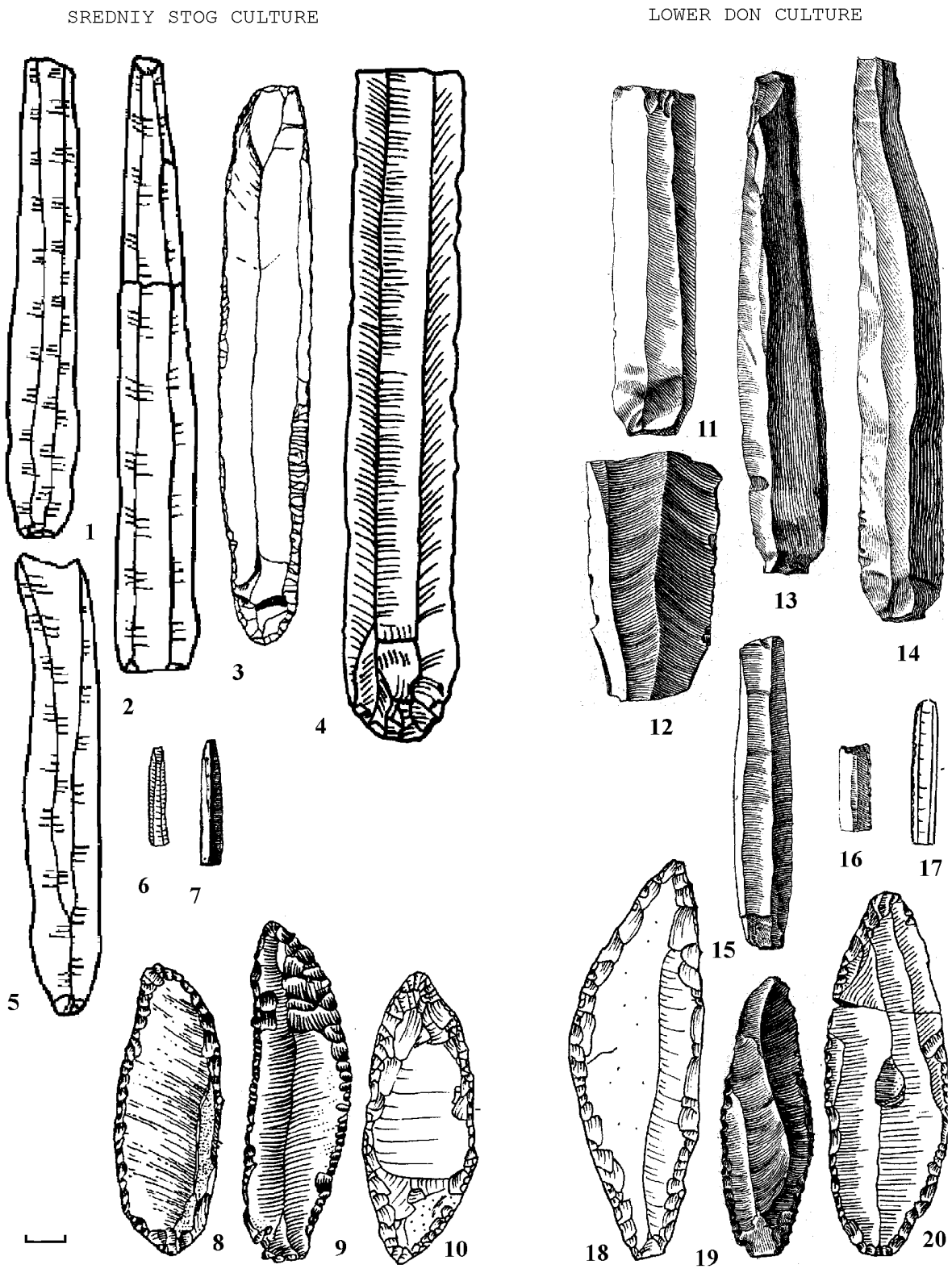


Fig. 147. Comparative table of blades and tools made of them of the Sredniy Stog (1-10) and Lower Don (11-20) cultures

1-3,5 - Novodanilovka; 4 - Gonova Mogila; 6 - Reka Devnja; - Decea Muresului; 8 - Krivoy Rog; 9 - Petro-Svistunovo; 10 - Strilcha Skelja; 11-17,19 - Mariupol; 18 - third layer of Rakushechny Jar; 20 - second layer of Razdorskoe.

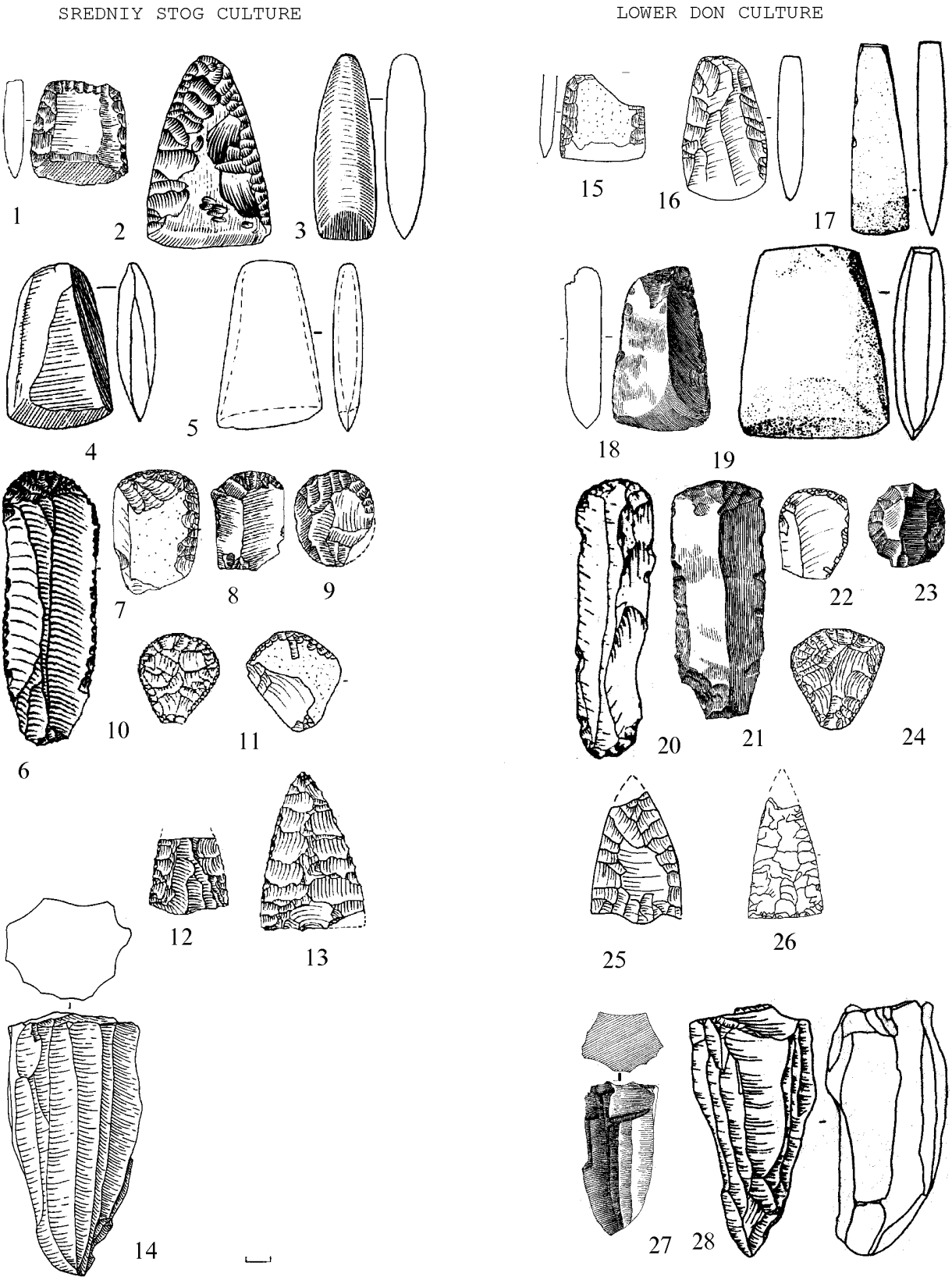


Fig. 148. Comparative table of materials of the Sredniy Stog (1-14) and Lower Don (15-28) cultures

1,4,8,9,25 - Razdorskoe; 2 - Petro-Svistunovo; 3,6,12,13 - Yama; 5,14 - Giurgiulesti ; 7,11, 15,24 - Razdolnoe; 10 - Sredniy Stog; 16,17,19,20, 28 - Rakushechny Jar; 18,21-23,26,27 - Mariupol.

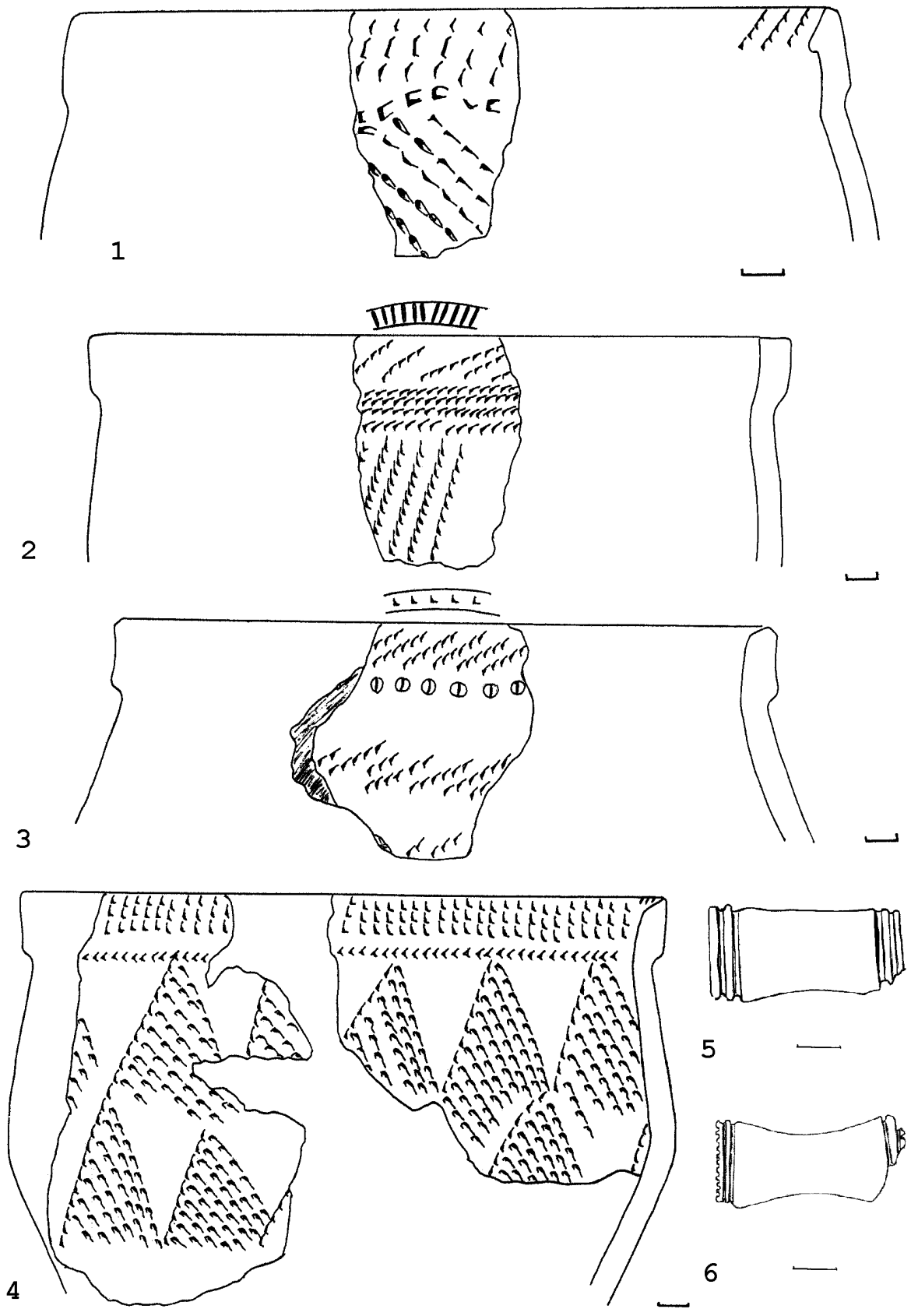
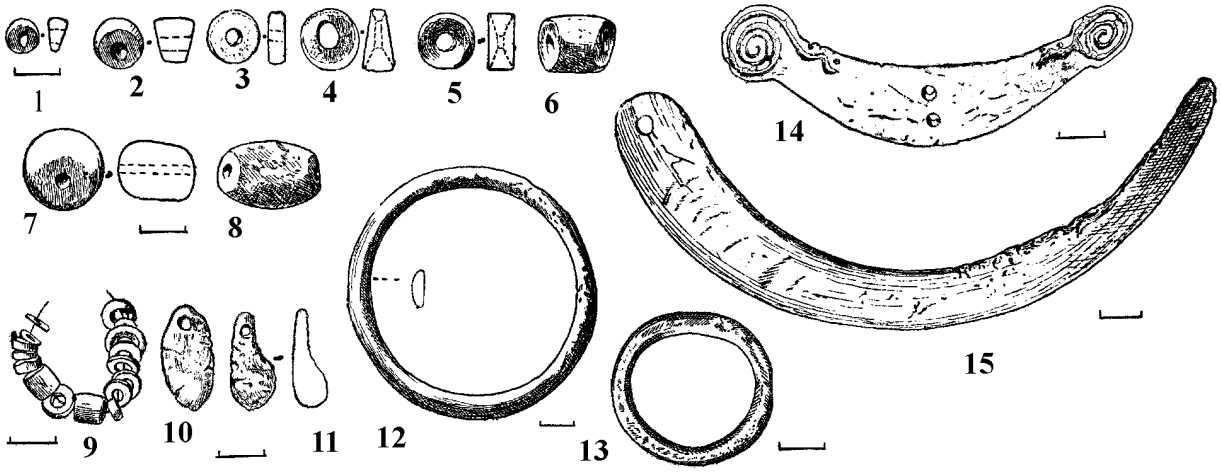


Fig. 149. Materials of the second period of the Azov-Dnieper culture
1-4 - second layer of Strilcha Skelja; 5,6 - Jasinovatka.

NALCHIK CEMETERY



SETTLEMENT ZAMOK-SVOBODNOE TYPE

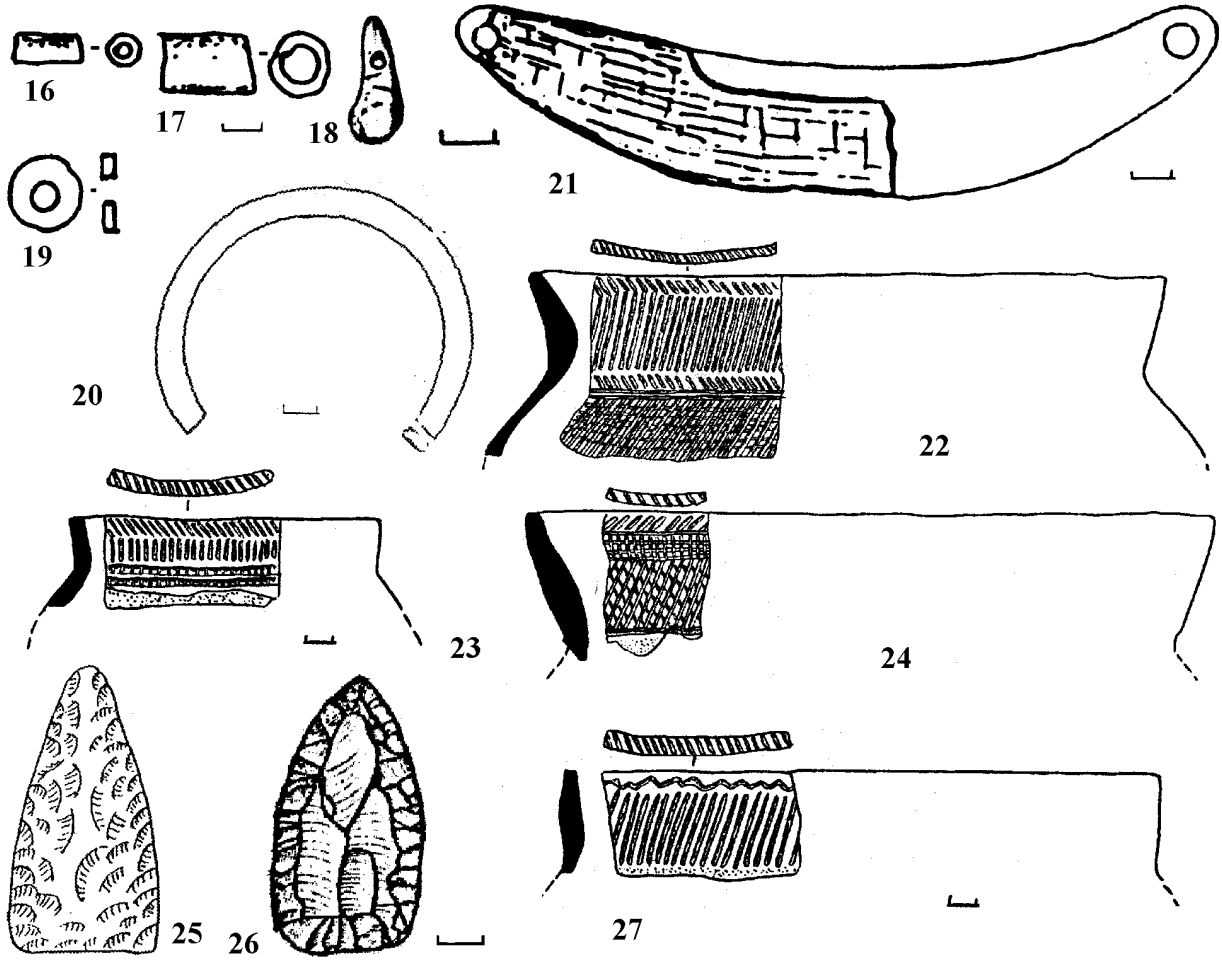


Fig. 150. Materials of the Early Eneolithic sites from the Northern Caucasus
1-15 - Nalchik cemetery (after Круглов et al. 1949); 16,17,19-21,25 - Zamok (after Кореневский 1998); 18,22-24,26,27 - Svobodnoe (after Нехаев 1992)

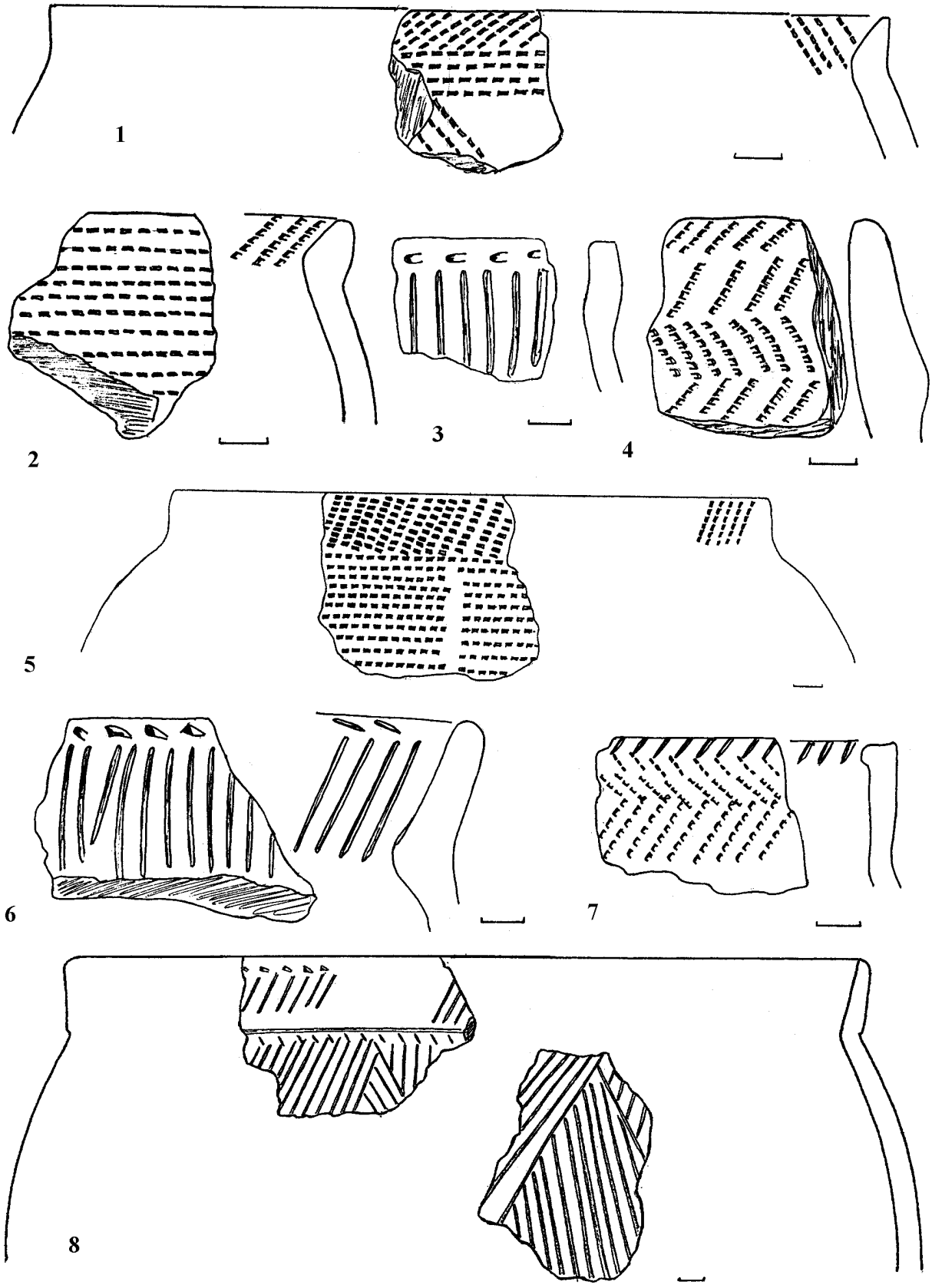


Fig. 151. Pottery of the Khvalynsk culture from Kara-Kuduk.

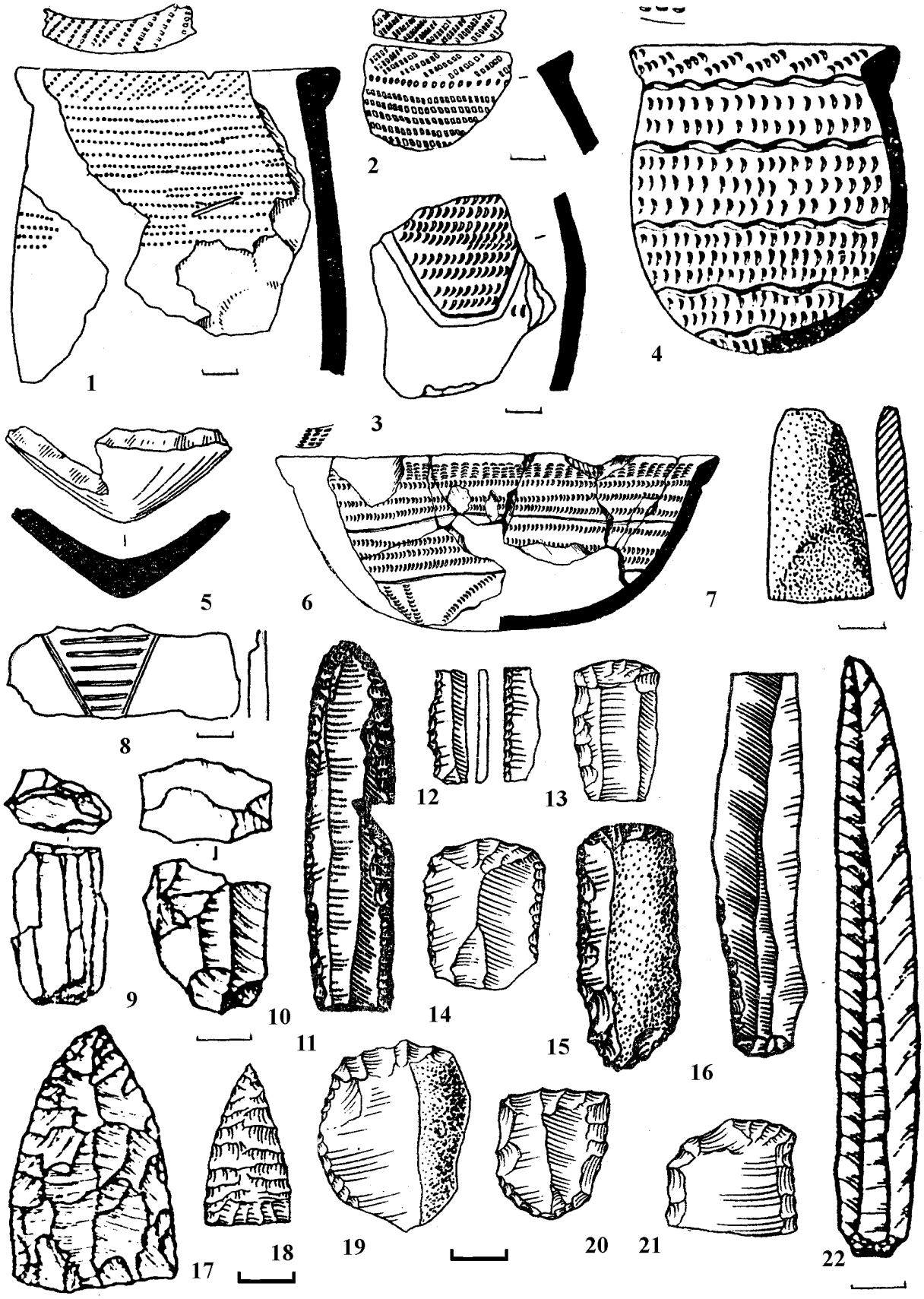


Fig. 152. Materials of the Khvalynsk culture

1-7,9-11,17,22 - Khvalynsk 1 cemetery (after Агапов et al. 1990);
8,12-16,17-21 - Kair-Shak (after Барынкин 1989).

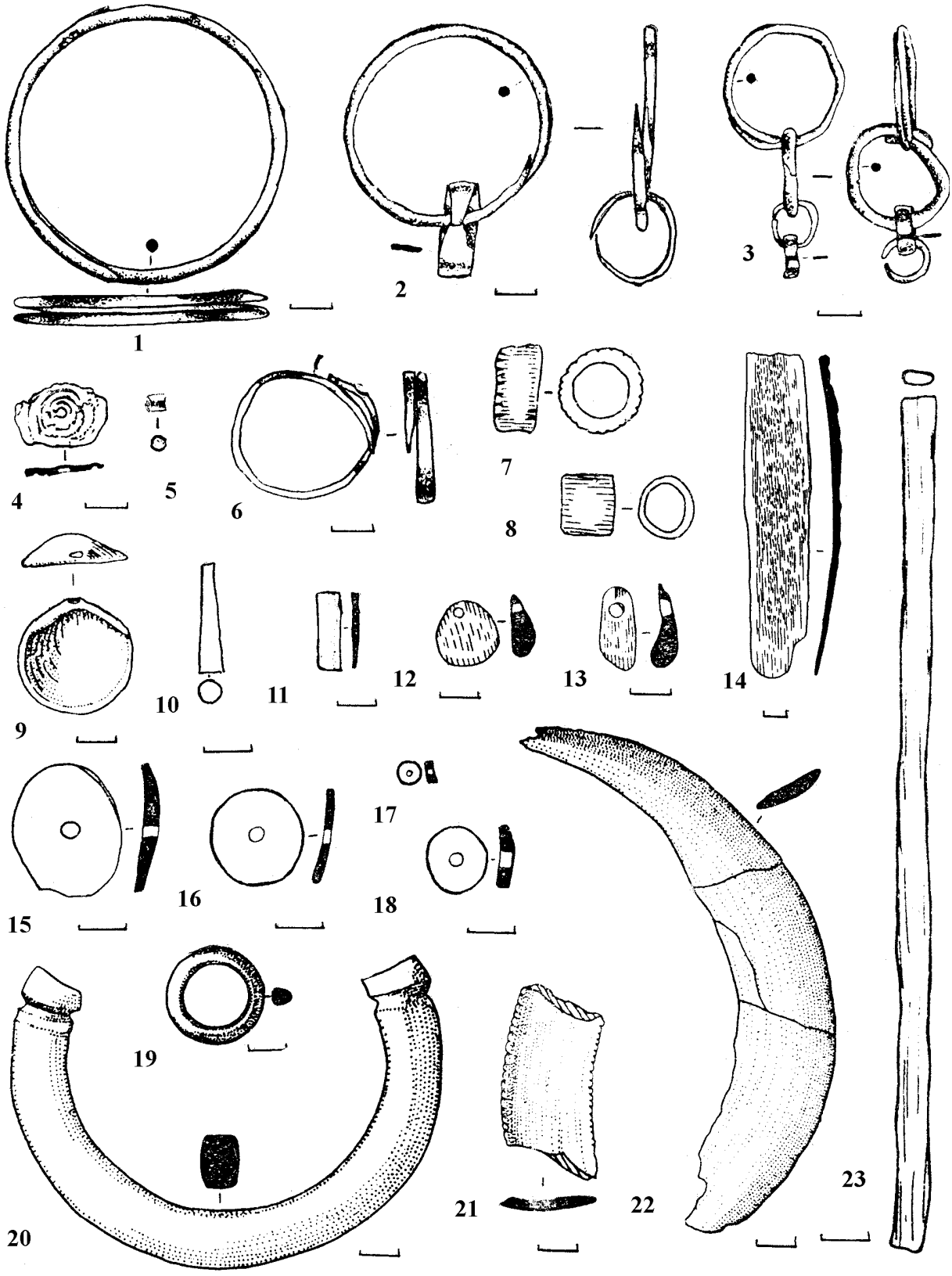


Fig. 153. Materials of the Khvalynsk culture from Khvalynsk 1 cemetery 7,8,12-14,21-23 - bone; 9-11,15-18 - shell; 19,20 - stone (after Агапов et al. 1990).

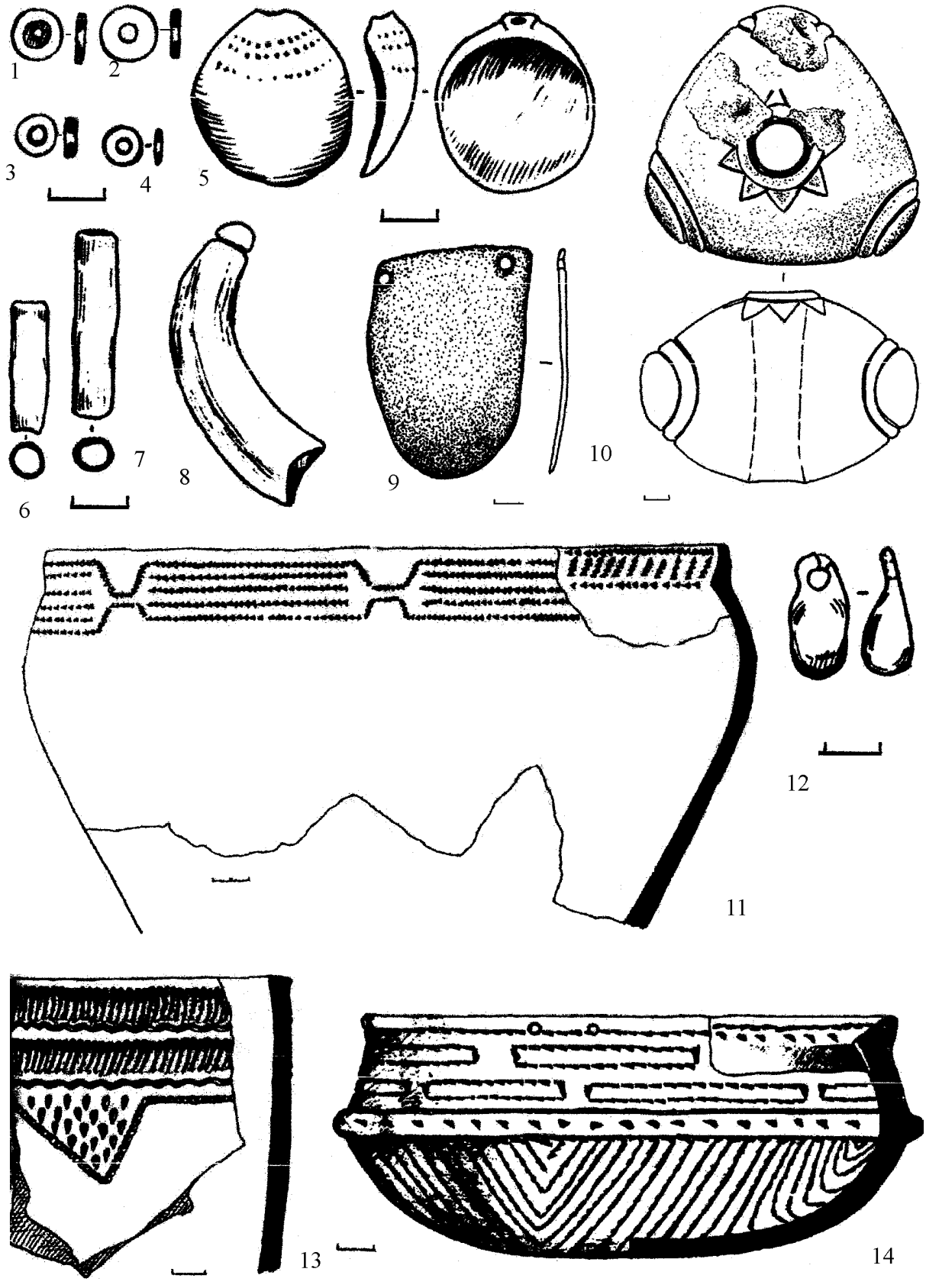


Fig. 154. Materials of the Orlovka culture from Varfolomeevka
1-5 - shell; 6-8,12 - bone; 9 - copper (after Юдин 2004).